The Journal of the
American Medical Association
Published Under the Auspices of the Board of Trustees

VOL LXVIII, No 21 CHICAGO, ILLINOIS MAY 26, 1917

108
4

HYPERTROPHIC STENOSIS IN INFANTS *

L. EMMETT HOLT, MD, LLD
Professor of Diseases of Children Columbia University, College of Physicians and Surgeons
NEW YORK

The data which form the basis of this paper have been derived from a study of 133 cases of pyloric stenosis in infants who have been treated in the wards and private rooms of the Babies' Hospital in my own practice and that of my colleagues, and eight cases which I have seen with physicians outside the hospital, making 141 in all Of the fatal cases, the stomach has been examined at necropsy in thirty-five Microscopic examinations of the stomach have been made in twelve cases by Dr Wollstein, pathologist to the hospital Of the infants who recovered, three have been lost sight of, ten died subsequently from other conditions, the remaining sixty-four have been followed almost up to the date of writing, twelve of them for a period of four years or over

Pyloric stenosis of infancy has been regarded by some writers as essentially a condition of tonic muscular spasm, hypertrophy when present being secondary Others have considered the essential lesion to be a congenital hypertrophy with spasm superadded Still others have argued that there are two distinct types of cases — one purely spasmodic, the other hypertrophic

The clinical course and the uniform pathologic findings have convinced my colleagues as well as myself that a division of cases of pyloric stenosis of infants into spasmodic and hypertrophic types is not admissible There are seen in early infancy a variety of gastric disturbances which may present some of the symptoms of hypertrophic stenosis, but careful observation shows that they are quite distinct from them Cases of true hypertrophic stenosis, however, differ much in degree, in very few is the obstruction complete, but hypertrophy, undoubtedly congenital, is the essential lesion in all, spasm being added as a secondary condition Dent[1] found the hypertrophy in a 7 months' fetus It is inconceivable that the hypertrophy such as has been found by operation to exist two or three weeks after birth could have developed as a result of spasm Furthermore, I hold that persistent spasm of the pylorus without hypertrophy has not yet been established

Assuming that the hypertrophy is congenital, it might be expected that symptoms would begin to show themselves soon after birth But this is almost never the case Seldom (in only 4 per cent of our cases) do they begin before the end of the first week, and more often not for two, three or four weeks, during which time the infant appears in every way normal It does not appear that hypertrophy alone often produces sufficient narrowing to cause symptoms, at least not in infancy Not until spasm is added do symptoms usually begin What is it, then, which excites the muscular spasm on which the symptoms so largely depend? Regarding this we know as yet very little

The great majority of the cases are among infants entirely breast fed, and comparatively few have shown previous evidence of any gastric disorder But the stomach in early infancy is a highly sensitive organ, and just as disordered innervation of the intestine a few months later may excite intussusception, so now some trivial irritation may be sufficient to excite spasm of the pylorus We have seen relapses or a recurrence of forcible vomiting and active peristalsis excited by disturbances of digestion after these symptoms had been absent for some weeks

It is our firm belief from our observation of these patients in the early weeks that in all cases hypertrophy precedes the tonic spasm That the hypertrophy continues long after the spasm has subsided we have absolute proof We have repeatedly observed cases in which an unmistakable tumor could be felt for weeks after vomiting had subsided, the stools had been quite normal and peristalsis had entirely ceased

The number of cases is now considerable in which the tumor has been found still present at necropsy in children who have died from other causes some time after operation or recovery without operation

In Morse's[7] case the tumor was still present at necropsy in a child who died of acute disease six and a half months after a successful gastro-enterostomy

In Howland's[8] case the tumor was present in a child who died four months after recovery without operation

In Lewis and Grulee's[9] patient, operated on by gastro-enterostomy at 2 months and dying eight and a half months later, the tumor was approximately of the same size and consistency as that found at operation

In Walton's[10] case, a child dying seven months after a gastro-enterostomy, the tumor was still hard and thick, and the pylorus impervious

---

* Because of lack of space this article is abbreviated in THE JOURNAL. The complete article appears in the author s reprints

* Frederick A Packard Lecture delivered at Philadelphia Feb. 13 1917

[1] Dent C. T quoted by Cautley Diseases of Children 1910 p 265

[7] Morse Boston Med and Surg Jour, 1908 **158**, 480

[8] Howland Personal communication to the author

[9] Lewis Dean and Grulee C G The Pylorus After Gastro-Enterostomy for Congenital Pyloric Stenosis THE JOURNAL A. M A Jan 30 1915 p 410

[10] Walton Ann Surg 1914 **60**, 342

We are able to add four cases of our own in which late examinations have shown the persistence of the tumor One child died of diphtheria six months after a gastro-enterostomy, a second died by accident two years and two months after a gastro-enterostomy, and a third of pneumonia twenty-one months after a gastro-enterostomy In all these the tumor was still present at necropsy, and its condition was similar to that present at the time of the original operation In the fourth case, a child returned to the hospital four years and seven months after a gastro-enterostomy for an operation on a ventral hernia, a sequel of the early laparotomy, the examination of the stomach in this case also showed the pyloric tumor to be still present

CLINICAL PICTURE

An infant, usually breast fed, who has nursed well, gained normally in weight, has had sufficient and well digested stools and, in fact, has shown few or no signs of disturbance, begins to vomit persistently and forcibly These symptoms have their most frequent beginning in the third or fourth week of life, and in most cases their onset is abrupt and without assignable cause To the forcible vomiting are added marked constipation, steady loss in weight, and all the symptoms belonging to failing nutrition Careful examination reveals definite gastric peristaltic waves, and in most cases a palpable tumor in the pyloric region

So characteristic is the vomiting in these cases, as to the time of its occurrence, the manner in which it takes place and the matter vomited, that one can often make the diagnosis from this symptom alone It differs markedly from the usual vomiting seen in young babies, in that it occurs soon after nursing, often while the child is still at the breast It is forcible and projectile, the food is fairly shot out of the mouth, sometimes for a distance of 3 or 4 feet It is in large amounts, usually the entire contents of the stomach, and generally it is repeated after each feeding If the vomiting is infrequent, and does not occur after every feeding, the amount ejected at one time is often much larger than the amount taken at the last feeding The frequent regurgitation of small amounts of food is seldom seen The vomiting is unaccompanied by fever or pain, and in the beginning and usually for some time there is no impairment of appetite Immediately after emptying the stomach the child may seem so hungry as to take a full feeding Finally, the vomiting is persistent Nearly every change of food has a surprising effect in temporarily lessening the vomiting, but in a day or two it returns and is as severe as ever

The waves of gastric peristalsis have been so often described that a repetition is hardly necessary Intestinal peristalsis may be mistaken for them, though rarely, indeed Visible gastric peristalsis is, I believe, a constant symptom of these cases In the great majority of cases the waves are typical and unmistakable, though in some they may not be observed unless the patient can be frequently seen and closely watched under the most favorable conditions, the most important one being that observations are made immediately after filling the stomach, and that the child is quiet Slight atypical waves may be seen in a variety of conditions other than hypertrophic stenosis But the deep, regularly recurring waves passing from left to right and frequently followed by vomiting are a conspicuous feature of nearly every case

While a palpable tumor cannot be considered essential to the diagnosis, it will usually be found by a careful observer under favorable conditions In fully three fourths of the cases it is unmistakable, but I have seen men of much experience unable to feel a tumor when one was afterward shown to be present, and I have known men to be quite sure that they felt a tumor when none could be demonstrated at necropsy or operation The tumor is more distinct in the most severe cases It may persist for months in cases in which recovery occurs without operation The tumor is felt as a small movable mass about 2 cm in diameter and 3 cm long It is most frequently found about 3 cm to the right of the navel and a little above it, but there is liable to be considerable variation in position

Abnormal gastric retention is easily estimated by emptying the stomach two, three or four hours after a test meal by means of a simple suction apparatus composed of a rubber catheter, a small laboratory wash bottle and a suction tube The test meal which we have usually employed consists of 2 or 3 ounces of breast milk, diluted condensed milk answers the purpose, but one should not employ mixtures of unboiled cow's milk, as the coagulated milk in the stomach may block the tube Simply passing the stomach tube is not enough, considerable suction must be employed to empty the stomach completely In doubtful cases, several observations should be made or the retention determined even after each feeding In few of these cases is the pyloric opening completely closed, but the determination of the amount of retention gives perfectly definite evidence to the extent of its occlusion, quite as reliable as the Roentgen ray after bismuth

The secondary symptoms, constipation, wasting, scanty urine, etc, are simply a result of the vomiting In the most severe cases the closure of the pylorus may be complete and the stools contain no fecal matter, resembling meconium In most cases some food passes the pylorus, and the stools contain some solid fecal material

Wasting is a constant symptom, and its rapidity is the best guide to the seriousness of the case In the more marked types, the loss in weight frequently amounts to 2 or 3 ounces a day

In the milder type of cases, though gastric peristalsis is marked, the vomiting may occur only two or three times a day, and occasionally there may be none for days together The bowels move without medicine, and the stools are fecal, and often in normal amount The weight may be stationary, or at times there may even be a slight gain Gradually, in the course of from six weeks, but sometimes not till four or five months, the vomiting ceases altogether, the peristaltic waves are no longer seen, and the patient to all appearance has recovered Even in these cases the typical tumor is often to be felt for several weeks, and in three of my patients it was noted as late as the sixth month

In the severe cases the course is progressively from bad to worse The vomiting is constant, little or nothing being retained, the bowels move only from enemas or medicine The loss of weight may amount to a pound or more a week, the infants waste to skeletons, and when untreated usually die of inanition in from two to four weeks from the onset of symptoms Between these extremes, cases of all degrees of severity are seen

DIAGNOSIS

Enumerated in the order of their diagnostic importance I should place the points in this order

1 The history, if obtained from a reliable mother or nurse
2. Abnormal gastric retention, observations being repeated four or five times at least.
3 Peristaltic waves, not of diagnostic value unless typical
4 The presence of a palpable tumor
5 Wasting, constipation, scanty urine, etc

I have placed tumor fourth in importance Many would put it second Though a palpable tumor is readily found in the great majority of the cases, there is in quite a considerable number a degree of uncertainty regarding it, and I have seen equally good observers differ often on this point In any case, the diagnosis should not rest on the presence of a tumor, and, most of all, a decision regarding operation should not depend on it

Stress has been laid by some writers on the value of the Roentgen ray in diagnosis It does show whether the bismuth meal is passing through the pylorus, and the rapidity of its passage, and also whether or not the stomach is able to empty itself completely In few of the cases is there complete obstruction at the pylorus It is doubtful whether the Roentgen ray tells more than can be learned from careful observations of the gastric retention as described above Furthermore, it must be remembered that these patients are very young, most of them in bad condition, and that they bear the manipulation incident to successive investigations with the bismuth meal badly I have known one instance in which, after a series of such observations which occupied nearly twenty-four hours, the diagnosis was finally reached and the surgeon summoned, but the child was dead when the surgeon reached the bedside While in some early cases, with the infants in good condition, useful information may be obtained by a series of Roentgen observations with the vast majority of infants it is extremely doubtful whether the results are commensurate with the risks incurred

The principal difficulty in differential diagnosis is to distinguish cases of gastric indigestion with protracted vomiting from those of hypertrophic stenosis This is especially difficult, as in the former gastric contraction and even small peristaltic waves may sometimes be observed, but these are usually slight and atypical, and are only occasionally seen even with the closest observation The diagnosis is to be made by the absence of the other characteristic features of hypertrophic stenosis—the history, tumor and retention The point should be emphasized that slight gastric peristalsis, even when accompanied by frequent vomiting, which at times may be forcible, does not warrant the diagnosis of hypertrophic stenosis

There are certainly a number of conditions other than hypertrophic stenosis in which pyloric spasm is present Pyloric spasm with gastric peristalsis has been repeatedly observed in infants with ulcer of the duodenum Distinct gastric peristalsis was recently observed in the Babies' Hospital in an infant 4 days old with a congenital atresia of the esophagus The introduction of food or water was followed in this patient by distinct gastric peristalsis, though the necropsy showed that the fluid never passed beyond the middle of the esophagus The pylorus was normal We have seen one instance in which pressure on the upper part of the duodenum by a congenital band gave rise to persistent, forcible vomiting and marked gastric peristalsis, suggesting hypertrophic stenosis, but the vomiting began from the first days of life and was bilious in character In another recent case, which an exploratory operation revealed to be one of tuberculous peritonitis with a normal pylorus, there had been frequent vomiting, at times forcible, and definite gastric peristalsis There was a general matting together of the intestines from the tuberculous inflammation, but no definite pressure on the upper intestine

It is evident, then, that there are quite a large number of different pathologic conditions in which gastric peristalsis and presumably pyloric spasm may be occasionally seen To confuse these cases with hypertrophic stenosis, or to consider them as closely allied pathologic conditions just because they have one or two symptoms in common does not seem justifiable It has greatly obscured the discussion of the subject Hypertrophic stenosis should be regarded as a pathologic entity, though its symptoms vary greatly, according as the lesion is mild or severe

MEDICAL TREATMENT

The medical treatment of hypertrophic stenosis consists in careful feeding and stomach washing The gastric lavage should be practiced at first twice a day, and later at longer intervals, it serves the purpose of emptying the stomach thoroughly of mucus and fermented food, the water should be used warmer than usual, that is, up to 112 F If it can be secured, breast milk is the preferable food, but one not rich in fat is desirable The common practice of weaning as soon as symptoms develop is most unwise In default of breast milk, a modified milk mixture low in fat should be employed

With respect to quantities and intervals of feeding, cases respond differently We have usually depended on from 1 to 3 ounces at three or four hour intervals, or small quantities and shorter intervals, especially if the food is breast milk With the longer intervals, water should be given between feedings In greatly prostrated patients, hypodermoclysis should be used daily, from 150 to 250 c c of 4 per cent dextrose may be given in a saline solution at one time Rectal feeding is of little assistance The bowels are usually best moved by enema I believe that drugs and local applications of heat over the epigastrium for the purpose of allaying the spasm are of little value The weight should be carefully watched and taken daily, as it is the best guide to the patient's condition and progress

SURGICAL TREATMENT

The first recorded operation for hypertrophic stenosis in infancy of which I can find record was that by Cordua[11] in 1893 The operation was a jejunostomy, the patient did not recover I have found no more operations reported until 1898, when two done by Willy Meyer[12] of New York were reported, and a few weeks later one by Stern[13] in Germany, the operation, however, having been done some months before These three were all gastro-enterostomies, and in none did the patient recover After the year 1900 the number of patients operated on steadily increases, though Shaw and Elting,[14] writing in 1904, could find recorded up to that time, including their own case, but thirty-nine operations, with seventeen recoveries Only five of these operations had been done in this country

---

[11] Cordua, referred to by Grisson Deutsch Ztschr f Chir, 1904 75, 111

[12] Meltzer and Meyer Med Rec, New York Aug 20, 1898

[13] Stern Deutsch med Wchnschr 1898 24 601 604

[14] Shaw and Elting Arch Pediat 1904 p 893

In 1908, Dufour and Fredet[17] collected published results in 135 operations which included the foregoing, and showed a mortality of 50 per cent

This certainly was not a very encouraging showing, and the results led Heubner and Pfaundler and others in Germany, and Hutchinson in London to inveigh against operation altogether, and to take the position that the great majority of the cases could be cured by medical means alone and that surgery was seldom if ever to be invoked

With experience and improved technic during the next few years, surgeons in this country, particularly Scudder,[18] Downes[19] and Richter,[20] obtained much better results than those reported above, but still the general mortality attending operation was so high that physicians were loath to refer patients for operation, particularly when medical treatment was advocated by such high authorities as those mentioned

In 1913, Rammstedt[21] of Munster reported a successful case in which he simply divided the circular muscular layer of the pylorus by external incision In his case, a typical one, the patient made an excellent recovery He advocated this procedure as a substitute for the older operations—gastro-enterostomy, divulsion and pylorplasty—then in vogue The great advantages he claimed were that the stomach was not opened and the duration of the operation was much shortened In his case it required only fifteen minutes, as compared with from thirty to fifty minutes needed for most of the other operations

TABLE 1—RESULTS IN ONE HUNDRED AND THIRTY FIVE OPERATIONS

Groups	Cases	Recoveries
Gastro enterostomy	52	22
Divulsion	36	21
Pyloroplasty	22	13
Various modifications and combinations	25	12
Total	135	68

So far as I have been able to learn, this single case was the only one he has ever reported But the operation was taken up by the surgeons of the Babies' Hospital, first by Dr Alfred S Taylor and then by Dr William A Downes, and now for over two years has been the only operation done in that institution

In Table 2 are given the results obtained by medical treatment and by the older and the more recent surgical treatment in the patients who have come under my observation in private practice and those admitted to the Babies' Hospital in my own practice and that of my colleagues, Drs Downes, Taylor, Kerley and Bartlett

Rammstedt's operation of external muscle division has been done in the hospital up to January, 1917, in sixty-seven cases, all but one of these by Dr Downes Up to January, 1915, it was done occasionally, in all, on six patients Since that date it has been done exclusively in the institution In nineteen of the first twenty cases, in order to make sure that the constriction had been completely divided, the stomach was opened and a sound passed through the pylorus This was then decided by the surgeon to be quite unnecessary, and hence discontinued in the last forty-seven operations It certainly adds to the operative risk

The comparison of statistics of different men in different cities with different types of cases is not such conclusive evidence of the value of any plan of treatment as is a comparison of results in a single institution where the general run of cases is much the same, where all the operations have been done by the same surgeon and where the after-treatment followed was identical

Including my private cases and the patients operated on at the Babies' Hospital, there were forty-one gastro-enterostomies with a mortality of 51 per cent ; of the twenty-eight cases in which operation was performed by Dr Downes, the mortality was 43 per cent Of the sixty-seven cases in which the Rammstedt operation was performed, the mortality was but 24 per cent.

The advantages of this operation are evident to one who has had experience with the other operations proposed First in importance may be mentioned the time required Seldom does the entire operation consume over fifteen minutes, and it is often completed in ten The stomach is not opened, and the risks of nonunion, leakage and peritonitis from this cause are eliminated Hemorrhage is seldom troublesome, no suturing is required, and a minimum handling of the viscera So much for the surgical aspects Our experience has shown that the shock is much less severe, the temperature reaction is less marked, food can be pushed more rapidly, and disturbances of digestion, particularly diarrhea, which has been so troublesome a symptom after gastro-enterostomy in more than half our cases, are much less frequent and less severe This is undoubtedly due to the fact that the food passes normally into the duodenum instead of directly into the jejunum[22]

Experience has shown that there are some special dangers connected with this operation The most important are the wounding of the mucous membrane, incomplete division of the constricting muscle, and hemorrhage Wounding the mucous membrane occurred in but three cases in our series, two of them being among the first operations done Both of these patients recovered In one other this accident was followed by leakage, peritonitis and death The incomplete division of the constriction happened but once in our series of sixty-seven consecutive operations In one child, however, a previous operation in another hospital had not relieved the obstruction, and the symptoms continued, although the obstruction was relieved by the second operation and the vomiting ceased, the patient died of marasmus two weeks later Both of the accidents mentioned will occur seldom in the hands of an experienced surgeon The risk of hemorrhage is a slight one, but it should be kept in mind as a possible danger from the operation wound which is left It has happened but once in the hospital series, and that the patient was a bleeder

An analysis of the sixteen deaths in the Rammstedt cases is interesting Six infants died from shock within a few hours after operation, but all of them were in extremely bad condition at the time of operation, and two of them almost moribund In none had symptoms lasted for less than four and a half weeks, and in two they had lasted over ten weeks One infant had whooping cough when operated on, and died from bronchopneumonia on the sixth day There remain nine deaths connected with the operation or due to the original condition which the operation did not relieve Three were from peritonitis, one from hemorrhage, one from continued wasting, one from continuance of vomiting, the constriction not being entirely relieved, and in three, death occurred suddenly on the first, second and seventh day, respectively, no cause being discoverable

---

[17] Dufour and Fredet Rev de Chir, *1908, p 208*

[18] Scudder Boston Med and Surg Jour, August, 1908, Surg, Gynec and Obst, 1911, **10**, 375, Ann Surg, February, 1914

[19] Downes, W A Pyloric Obstruction in Infants, THE JOURNAL A M A, June 27, 1914, p 2019, Surg, Gynec and Obst., March, 1916, p 251

[20] Richter, H M Congenital Pyloric Stenosis, THE JOURNAL A M A, Jan 31, 1914, p 353

[21] Rammstedt Med Klin, 1912, **8**, 1702 1705, Zentralbl f Chir, 1913, **11**, 3

[22] For details regarding surgical technic, I would refer to the publications of Dr Downes (Footnote 19)

Excluding the seven operations which were done under conditions which make it impossible to estimate the value of any operation, there remain sixty cases with nine deaths, a mortality of 15 per cent This I believe, is the approximate mortality in these cases, taking them as they come In a hospital like the Babies', where so many long-neglected cases are brought, it will be nearer 25 per cent It should be remembered that these are chiefly hospital ward patients, and that they represent consecutive admissions In only a single case in the last five years was operation refused on account of the child's condition This patient when admitted was 3 months old and weighed, after eight weeks' medical treatment, but 3 pounds, 14 ounces, she lived only a few hours

AFTER-TREATMENT

The success of operative measures in this condition is dependent in no small degree on the after-treatment For a number of days after the operation the lives of these little patients often hang by a slender thread, and errors in judgment, especially with regard to feeding, often have the most disastrous consequences It is, then, of the highest importance not only that the operation be done by a skilled surgeon, but also that the infant after the wound is closed be under the care of one equally skilled in the postoperative management

From January, 1910, to January, 1917, there were 101 operations done at the Babies' Hospital The postoperative management which has gradually been evolved as a result of the experience of the surgeons, the attending physicians and the resident medical staff has been fully detailed in a recent publication by Dr Edward Morgan,[23] former resident physician It will be given here only in outline

It is to be borne in mind that practically all these infants are between 4 and 8 weeks old at the time of operation, and that they all have become much reduced in vitality as a result of loss in weight (often amounting to 3 or 4 pounds) and several weeks of protracted vomiting It is of the first importance, therefore, that everything be done to conserve every particle of strength which the infant possesses Exposure during operation should be the smallest possible The room should be warm and the patient protected still further by artificial heat Before the anesthetic is given, the stomach is emptied of food, gas and mucus Stimulants during the operation are rarely called for After removal from the table, the infant is wrapped in hot blankets and placed in a bed surrounded by hot water bags The head of the bed is kept lowered until the effect of the anesthetic has passed off As a means of introducing fluids into the tissues of these infants, often completely dehydrated as a result of the previous vomiting, nothing compares with hypodermoclysis From 120 to 240 c c of a physiologic sodium chlorid solution are given, usually between the scapulae, and it is surprising how rapidly this is absorbed, even in some of the worst cases Of stimulants given hypodermically, epinephrin has given us the most satisfactory results in doses of from 3 to 5 minims of the 1 1,000 solution With the precautions mentioned, the small amount of shock to these patients from laparotomy is often amazing

Feeding is usually begun as soon as the child has entirely recovered from the anesthetic The position now used is with the head raised, sometimes to the semierect posture, so as to facilitate the expulsion of gas Breast milk is indispensable, but it must be given at regular intervals and in carefully measured quantities, or serious disturbances of digestion may ensue, sometimes with fatal results, when everything previously has gone exceptionally well The amount of food should be at first small, not over 2 or 3 teaspoonfuls of breast milk diluted with 1 or 2 teaspoonfuls of water This is given with a medicine dropper and repeated in gradually increasing amounts every three hours Water is given between the feedings in similar quantities At the end of twenty-four hours, the infant is usually taking 4 or 5 teaspoonfuls of breast milk undiluted, and at the end of two days 1 ounce every three hours These quantities are gradually increased to about 2 ounces by the fifth or sixth day, and at a week or ten days, but not before, the infant may be put to the breast At first this should be for only two or three minutes For the first month or two, artificial feeding presents unusual difficulties, and can seldom be successfully carried on except by one with much experience

The administration of a teaspoonful of castor oil at the end of twenty-four hours is a routine practice whose beneficial results we seldom have had reason to doubt It aids in the expulsion of gas and mucus, and seems to add much to the comfort of the patient Often all disposition to vomit ceases as soon as the bowels have acted freely Constipation after this is uncommon, but not infrequently diarrhea occurs This was much more often seen when gastro-enterostomy was done than after the Rammstedt operation In the former, particularly, it may be a most troublesome symptom for several weeks The most successful measures for controlling this have been the substitution of protein milk (*Eiweissmilch*) for part of the breast milk, and the administration of moderate doses of bismuth and opium, since in the majority of the patients the chief factor in the diarrhea seems to be excessive peristalsis

Some vomiting is to be expected during the first twelve to twenty-four hours It is most frequently due to accumulation of gas in the stomach, and is relieved by posture or by passage of the stomach tube It may be due to a too rapid increase in the food or sometimes apparently only from a persistence of the hyperesthesia of the gastric mucous membrane Defects in the operation itself, when the obstruction has not been entirely relieved, may lead also to a continuance of the vomiting, finally, vomiting occurring after the third or fourth day may be due to peritonitis

MEDICAL VERSUS SURGICAL TREATMENT

On the whole, is medical or surgical treatment of hypertrophic stenosis in infancy to be advised? It must be admitted that there appears to be considerable difference of opinion among those with some experience in this disease To what is this difference of opinion due? Are the physician and the surgeon talking about the same clinical and pathologic conditions? I do not believe that they always are There are, I believe, a number of pathologic conditions in early infancy associated with vomiting which have many of the symptoms seen in hypertrophic stenosis, but which on close study are seen to be quite different There are also different conditions in which there is visible gastric peristalsis Even this symptom does not put the case in the same class with those we have been discussing A large proportion of such patients recover with medical treatment only, as do also many of those of hypertrophic stenosis of the milder type, although probably in many of them the correct diagnosis is not made

---

[23] Morgan E A The Postoperative Management of Pyloric Stenosis Am Jour Dis Child April 1916 pp 245 256

Let us drop these two groups of cases from our discussion and consider only the patients with hypertrophic stenosis as they are admitted to hospitals or as the pediatrician sees them Such patients have usually been first in the hands of the general practitioner Few of these cases have been recognized or received proper early treatment They have generally been looked on as difficult feeding cases In most of them the first thing done is to wean the baby, on the supposition that the mother's milk is at fault—usually the worst possible advice Every conceivable change in food formula is made with the expectation of controlling the vomiting, but with no result, or at most only a temporary benefit The average duration of the symptoms before the child is brought to the consultant or admitted to the hospital has been in our experience four weeks Seldom are any but the most severe types seen as early as the second week

The problem, then, of the infant with hypertrophic stenosis as the surgeon and the hospital physician sees it is that of a baby 7 weeks old weighing 7 pounds, who has been vomiting for four weeks, such at least are our average figures In some there is a history of continuous vomiting for two weeks or more and rapid loss in weight amounting to 2 or 3 ounces a day In other cases, alternations of improvement and relapse have perhaps continued for two or three months

The principal medical risk is of acute inanition, which may come on quite rapidly, and in the most severe type of disease, the infant may quickly sink to so low a point that it is impossible to save him by any means In the less severe types there is the danger from slow marasmus, especially in hospitals and with patients in poor surroundings In some of these cases the vomiting may be insignificant and the stools fecal, yet the child may slowly lose weight till his condition is hopeless, or he may die quite suddenly when apparently as well as for several days before This is particularly apt to be the case unless the weight is closely watched and the actual amount of food retained is carefully recorded In hospitals; risks of intercurrent disease are not to be ignored in patients with such feeble resistance as these infants Finally, there must be considered the possibility of trouble in later life from these cases not treated surgically

Certain surgical risks are unavoidable and belong to any operation as serious as a laparotomy The chief one with these patients is shock, which in most cases is surprisingly little, considering the gravity of the operation and the tender age of the patients Few infants who are in even a reasonably good condition die from shock, though with those in whom the disease has not been recognized or has been long neglected, this is important All the surgical dangers — shock, leakage, sepsis, hemorrhage — are greatly lessened by the substitution of the ten or fifteen minute operation proposed by Rammstedt for a gastro-enterostomy, which takes three or four times as long After the Rammstedt operation also not only these grave dangers, but all the complications and sequelae are much less frequent and less severe The reactionary temperature is not so high, and vomiting and diarrhea, both often troublesome after gastro-enterostomy, are relatively seldom seen, the food can be begun earlier and increased more rapidly, convalescence is altogether much shorter, and gain in weight in most cases begins by the end of the second week and thereafter proceeds as in normal infants

If the child is seen in private practice with the possibilities of the best care and most intelligent feeding—particularly breast feeding—if the weight is stationary or the loss in weight is not great and the child still in good condition, if the vomiting is only two or three times a day, if the stools are fecal, waiting is to be advised

On the contrary, if the weight has fallen to 6 pounds or below and the loss is still going on, if the vomiting is continuous, if there is marked gastric retention, if the stools contain no fecal matter, no time should be lost, but immediate operation advised, particularly in a hospital

My early personal experience led me strongly to favor the medical treatment of these cases I was greatly influenced by a few conspicuous successes in a few patients treated without operation, and also by the results of the first seven cases in which I saw operation done, five of the seven having been fatal Increased experience has shown that the average case medically treated, unless it shows improvement in a few days, is liable to run a very prolonged course, even though the child may ultimately recover

No better argument can be adduced for operative treatment than a comparison of our results at the Babies' Hospital in the three periods into which I have divided our experience (Table 2) During the first period, up to the end of 1911, our policy was operation only after a prolonged trial had been made of medical treatment, surgery being looked on as a last resort

In the second period, comprising the years 1912, 1913 and 1914, operation was done in nearly every case within forty-eight hours, and the larger number within twenty-four hours, after admission

During the third period, comprising the years 1915 and 1916, sixty-three cases were treated, sixty-one by operation, all Rammstedts, by Dr Downes, with a mortality of 23 per cent

These results have convinced not only myself but all my colleagues in the hospital that with the average infant admitted with hypertrophic stenosis, the immediate performance of the Rammstedt operation offers a better chance of life than any other method of treatment yet proposed

FINAL RESULTS

It would seem rather remarkable if so marked a pathologic condition as exists in these cases should disappear in a few weeks The symptoms, it is true, subside completely and, so far as one can positively say, permanently At least none are seen for years It is this fact that has led many to regard the essential condition as merely a pyloric spasm, believing that when this has disappeared the patient is well To this view we cannot subscribe We believe not only that hypertrophy precedes the spasm but also that it continues long after the spasm has ceased Proof of the latter point has already been cited Most observations on this disease are still recent, and we cannot be quite certain yet in any case that symptoms may not appear later in life It is true that they have rarely been noted in early childhood But in the classical case of Beardsley (1788), marked symptoms were noted in the first week of life They continued more or less severely, and at 2 years were described in language showing that they were typical The child continued to suffer until his death at 5 years, the necropsy showing marked hypertrophy of the pylorus, considered by the author "scirrhus" The pyloric obstruction was so tight that only the "finest fluid" passed into the duodenum More and more reports are constantly appearing of hypertrophic pyloric stenosis in older children and early adult life, which are ascribed to a congenial condition

That hypertrophic stenosis may exist for years before it gives symptoms is shown by the case of Rosenheim,[29] in which a boy had no gastric symptoms until he was over 5 years old An operation at 6½ years disclosed a hypertrophic stenosis I have seen but one case of pyloric stenosis in an older child, a girl of 4½ years In this the diagnosis was established by operation, but there was no history of protracted vomiting in infancy, and definite gastric symptoms did not begin until the patient was 3 years old

In my own series of cases I have been able to follow for any length of time only seven patients who recovered without operation—one for eleven years, one for seven, three for six, one for five, and one for four years All were in excellent health and only one had vomiting attacks after his initial recovery, and these ceased entirely at the age of 8 months None who had been observed for shorter periods had shown any symptoms after the first year

Turning now to the final results in the operative cases I shall first consider those after gastro-enterostomy Of the twenty patients who recovered, one died two weeks and one four weeks after operation, of enterocolitis, one died after four months, of diphtheria, one after two years from accident, one, twenty-one months after from pneumonia, and one was lost sight of The remaining fourteen patients have been followed up to the last few weeks One seen after eleven and a half years is a well grown, normal boy Four were followed for from four to five and a half years, all were then quite well, but one had suffered from occasional attacks of vomiting up to his third year Of eight followed for from two to two and three quarter years, all were strong and healthy, but one suffered from vomiting attacks for nearly a year after operation Roentgen observations in cases two or three years after gastro-enterostomy showed that the food was still passing through the operative wound Judging from the histories of these patients, the operation of gastro-enterostomy in no wise interferes with the normal growth and development of children

The Rammstedt cases (Table 3) have necessarily been observed for a much shorter time, but long enough to establish the fact that this operation does relieve the obstruction at once and completely Of the fifty-one infants who recovered, five died subsequently

TABLE 2—RESULTS OF MEDICAL TREATMENT AND THE OLDER AND THE MORE RECENT SURGICAL TREATMENT *

	Cases, No	Recovered, No	Died, No	Mortality, Per Cent.	Average Age Weeks	Average Weight Pounds
First Period 1901 1911						
Without operation	24	10	14	58		
Operation (Gastro-enterostomy)	17	7	10	58		
Total	41	17	24	58	7 3	7 6
Second Period 1912 1914						
Without operation	7	3	4	57		
Operation (Gastro-enterostomy, 24 Rammstedt, 6)	30	17	13	43		
Total	37	20	17	45 9	6 6	7 7
Third Period 191 1916						
Without operation	2	1	1	50		
Operation (Rammstedt)	61	47	14	23		
Total	63	48	15	23 8	7 0	6 8

* In the first period operation was performed generally after medical treatment in the second period usually soon after admission and in the third period always soon after admission. The average duration of symptoms on admission in each group was 4 2 weeks.

The remaining forty-six infants have been followed up to the last few weeks The time elapsing from the operation to the date of last report was

In four cases between 2 years, 2 months, and 3 years
In fourteen cases, between 1 year, 6 months, and 2 years
In twelve cases, between 10 months and 15 months
In eleven cases, between 5 months and 8 months
In five cases, between 1 month and 4 months

When seen, these children were almost without exception in the best of health, they were plump and rosy-cheeked, nearly all above average weight, and as fine a group as one would care to see

TABLE 3—RAMMSTEDT'S OPERATION AT BABIES' HOSPITAL *

	Cases No	Deaths, No	Mortality Per Cent
Prior to 1915	6	2	33
1915	35	10	28 5
1916	26	4	15 3
	67	16	24

* Three patients died from gastro-intestinal conditions subsequently (4 weeks 6 weeks 7 weeks) one patient died from empyema (3 months) and one from pneumonia (4 months) forty six have been followed and are well to date.

Our experience, I think, warrants the conclusion that the Rammstedt operation meets the indications in this condition If this simple procedure does this, then there is no longer any justification for the other more serious surgical procedures which have been employed in the past

CONCLUSIONS

1 Hypertrophic stenosis of the pylorus in infancy is a pathologic entity It should not be confused with other pathologic conditions which may be accompanied by vomiting and occasional gastric peristalsis

2 In many of the milder forms, the patients recover with only medical treatment

3 All those who do not improve under such treatment in the course of two or three weeks should be

---

[29] Rosenheim Berl klin Wchnschr 1899 32 703

opinion due? Are the physician and the surgeon talking about the same clinical and pathologic conditions? I do not believe that they always are There are, I believe, a number of pathologic conditions in early infancy associated with vomiting which have many of the symptoms seen in hypertrophic stenosis, but which on close study are seen to be quite different There are also different conditions in which there is visible gastric peristalsis Even this symptom does not put the case in the same class with those we have been discussing A large proportion of such patients recover with medical treatment only, as do also many of those of hypertrophic stenosis of the milder type, although probably in many of them the correct diagnosis is not made

Let us drop these two groups of cases from our discussion and consider only the patients with hypertrophic stenosis as they are admitted to hospitals or as the pediatrician sees them Such patients have usually been first in the hands of the general practitioner Few of these cases have been recognized or received proper early treatment They have generally been looked on as difficult feeding cases In most of them the first thing done is to wean the baby, on the supposition that the mother's milk is at fault—usually the worst possible advice Every conceivable change in food formula is made with the expectation of controlling the vomiting, but with no result, or at most only a temporary benefit The average duration of the symptoms before the child is brought to the consultant or admitted to the hospital has been in our experience four weeks Seldom are any but the most severe types seen as early as the second week

The problem, then, of the infant with hypertrophic stenosis as the surgeon and the hospital physician sees it is that of a baby 7 weeks old, weighing 7 pounds, who has been vomiting for four weeks, such at least are our average figures In some there is a history of continuous vomiting for two weeks or more and rapid loss in weight amounting to 2 or 3 ounces a day In other cases, alternations of improvement and relapse have perhaps continued for two or three months

The principal medical risk is of acute inanition, which may come on quite rapidly, and in the most severe type of disease, the infant may quickly sink to so low a point that it is impossible to save him by any means In the less severe types there is the danger from slow marasmus, especially in hospitals and with patients in poor surroundings In some of these cases the vomiting may be insignificant and the stools fecal, yet the child may slowly lose weight till his condition is hopeless, or he may die quite suddenly when apparently as well as for several days before This is particularly apt to be the case unless the weight is closely watched and the actual amount of food retained is carefully recorded In hospitals; risks of intercurrent disease are not to be ignored in patients with such feeble resistance as these infants Finally, there must be considered the possibility of trouble in later life from these cases not treated surgically

Certain surgical risks are unavoidable and belong to any operation as serious as a laparotomy The chief one with these patients is shock, which in most cases is surprisingly little, considering the gravity of the operation and the tender age of the patients Few infants who are in even a reasonably good condition die from shock, though with those in whom the disease has not been recognized or has been long neglected, this is important All the surgical dangers — shock, leakage, sepsis, hemorrhage — are greatly lessened by the substitution of the ten or fifteen minute operation proposed by Rammstedt for a gastro-enterostomy, which takes three or four times as long After the Rammstedt operation also not only these grave dangers, but all the complications and sequelae are much less frequent and less severe The reactionary temperature is not so high, and vomiting and diarrhea, both often troublesome after gastro-enterostomy, are relatively seldom seen, the food can be begun earlier and increased more rapidly, convalescence is altogether much shorter, and gain in weight in most cases begins by the end of the second week and thereafter proceeds as in normal infants

If the child is seen in private practice with the possibilities of the best care and most intelligent feeding—particularly breast feeding—if the weight is stationary or the loss in weight is not great and the child still in good condition, if the vomiting is only two or three times a day, if the stools are fecal, waiting is to be advised

On the contrary, if the weight has fallen to 6 pounds or below and the loss is still going on, if the vomiting is continuous, if there is marked gastric retention, if the stools contain no fecal matter, no time should be lost, but immediate operation advised, particularly in a hospital

My early personal experience led me strongly to favor the medical treatment of these cases I was greatly influenced by a few conspicuous successes in a few patients treated without operation, and also by the results of the first seven cases in which I saw operation done, five of the seven having been fatal Increased experience has shown that the average case medically treated, unless it shows improvement in a few days, is liable to run a very prolonged course, even though the child may ultimately recover

No better argument can be adduced for operative treatment than a comparison of our results at the Babies' Hospital in the three periods into which I have divided our experience (Table 2) During the first period, up to the end of 1911, our policy was operation only after a prolonged trial had been made of medical treatment, surgery being looked on as a last resort

In the second period, comprising the years 1912, 1913 and 1914, operation was done in nearly every case within forty-eight hours, and the larger number within twenty-four hours, after admission

During the third period, comprising the years 1915 and 1916, sixty-three cases were treated, sixty-one by operation, all Rammstedts, by Dr Downes, with a mortality of 23 per cent

These results have convinced not only myself but all my colleagues in the hospital that with the average infant admitted with hypertrophic stenosis, the immediate performance of the Rammstedt operation offers a better chance of life than any other method of treatment yet proposed

FINAL RESULTS

It would seem rather remarkable if so marked a pathologic condition as exists in these cases should disappear in a few weeks The symptoms, it is true, subside completely and, so far as one can positively say, permanently At least none are seen for years It is this fact that has led many to regard the essential condition as merely a pyloric spasm, believing that when this has disappeared the patient is well To this view we cannot subscribe We believe not only one of great speed The physical condition of the agar was very important to the speed of the reaction With a fine comminution of the agar in a gel state, it was possible to toxify the serums in five minutes or less In this way, the guinea-pig serum could be made so poisonous that it killed in a dose of 1 c c, and with rat serum this dose was reduced to 0 25 c c, and even less It is noteworthy that an extremely minute amount of agar is capable of making the rat serum toxic, thus 1 part of dry agar can toxify 400,000 parts of serum. Per cubic centimeter of serum, this means 0 0025 mg of dry agar, and when it is considered that the nitrogenous constituents of agar make up only a minute part of this amount, it will be seen that this result contraindicates Friedberger's theory that anaphylatoxin results from the cleavage of the nitrogenous substances present in the so-called antigen, in this case agar It may be added that numerous attempts to demonstrate the presence of a ferment which supposedly is concerned with the poison production proved entirely negative

Previous workers, employing anaphylatoxin which killed in a dosage of about 3 c c, were unable to test the effect of multiple doses of the poison With a method which regularly gave a toxic serum such that 0 25 c c was fatal, it was possible to test the effect of very large amounts of the poison In the case of guinea-pigs it was found that the injection of from one to forty lethal doses always caused rapid death, and it was possible to obtain noncoagulable blood when large doses were used When the poison was similarly tested on rats and rabbits, it was found that these were refractory The white rat, for example, would tolerate a quantity of poison sufficient to kill seventy-five guinea-pigs, the rabbit tested with forty of such doses likewise showed no effects These facts proved to be of great importance in the subsequent work.

As it had been shown that agar readily produced a poison when mixed with a serum, it was to be expected that the intravenous injection of agar would likewise lead to poison production in vivo and hence produce a nonspecific anaphylactic shock. The experiments made with this object in view led to remarkable results With the agar in a suitable physical state it is possible to produce an absolutely typical anaphylactic shock Moreover, this can be done with very minute amounts of agar A dose representing 9 mg of dry agar per kilogram of guinea-pig was found to be fatal It is a remarkable fact that this dose is less than that of most pathogenic bacteria, and yet these are supposed to be toxic because of the endotoxin which they contain Agar certainly does not contain an endotoxin, and, such being the case, one is forced to conclude that much of that which in the past has been designated as endotoxin is a myth The finely divided agar produces the same effect as the pathogenic or nonpathogenic bacterium when injected into a guinea-pig, or when mixed with serum in the test tube, the poison that is produced in either case is anaphylatoxin, and it is not made out of the intracellular contents

The rabbit and the white rat are less susceptible to the injection of agar, requiring from 20 to 30 mg per kilogram of body weight In these also the syndrome is that of typical anaphylactic shock The fact that the agar kills by producing in vivo the same poison anaphylatoxin, is demonstrable by making rapid transfusions of blood from the heart of the injected animal into the vein of a guinea-pig

PRODUCTION OF ANAPHYLATOXIN BY PEPTONE

It having been shown that agar produced anaphylatoxin on contact with serum or plasma, it was next in order to ascertain the mode of action of Witte's peptone As is well known, this peptone, or proteoses in general, when injected into the vein of a dog causes a rapid drop in blood pressure, and at the same time renders the blood incoagulable Because of these effects it has been held that anaphylactic shock was due to the formation of peptone or other cleavage products The injection of peptone into guinea-pigs does produce a typical anaphylactic shock, but it is noteworthy that per kilogram of guinea-pig, 300 mg are required, or thirty times the amount of agar The rat and the rabbit are considerably more resistant, the latter requiring 200 times more of peptone than of agar In other words, peptone is considerably less toxic than agar In all three species, the injection of peptone yields the syndrome of anaphylactic shock, namely, drop of blood pressure, incoagulability of the blood, distention of lungs, etc

Of further importance is the fact that when peptone is mixed with rat serum in the test tube it is capable of producing within five minutes anaphylatoxin And again, transfusion of the heart blood, after injection of peptone demonstrates that anaphylatoxin is formed in vivo as a result of the peptone injection These facts have a significant bearing on the mechanism of the reaction, since a clear peptone on mixture with a clear serum yields anaphylatoxin, it is difficult to account for this poison production by the prevalent theories of adsorption

PRODUCTION OF ANAPHYLATOXIN

In order to get an insight into the mechanism of anaphylatoxin production it was necessary to take up the question of the primary toxicity of serum It is well known that transfusion of whole blood or the injection of large amounts of serum may lead to severe toxic effects It has, indeed, been asserted that the effects produced are probably those of anaphylaxis The blood of a normal rabbit when rapidly transfused into the vein of a guinea-pig is usually harmless in a dose of 3 c c If, however the blood is held in the syringe for three minutes before injection, it becomes fatally toxic All bloods become highly toxic in the precoagulation stage, and the effects produced are those of anaphylatoxin Furthermore, transfusion tests made from the guinea-pig which receives the toxic blood into a normal guinea-pig demonstrate the presence of anaphylatoxin.

These and similar experiments go to show that the reaction which leads to coagulation is accompanied by the formation of anaphylatoxin When the blood is drawn, catalytic substances form which change (1) the fibrinogen into fibrin, and (2) the matrix of the poison into anaphylatoxin After coagulation, some of this poison remains in the serum and renders it more or less toxic The amount of poison present in a serum may be varied, at will, by allowing the clot to remain in contact with the serum, and especially by varying the method of defibrination Thus, for example, when the blood of a rabbit is divided into two portions and each then defibrinated in a different way, one serum may kill in doses of 2 c.c, while the other will require 6 c c to produce the same result

Normal serum is always more or less toxic, owing to a variable amount of the anaphylatoxin formed during the coagulation process, and alien substances such as agar, peptone and bacteria, merely increase the amount of this poison The fact that preclot blood, or defibrinated blood is more toxic than its serum is probably due to the presence of the catalyzer, formed in the precoagulation stage, which induces additional poison production when such blood is injected into the recipient The further observation that a defibrinated blood, kept at 60 C, coagulates much more rapidly that the clear serum indicates the presence of such disturbing or catalyzing agent

In the study of specific anaphylaxis, the rat was found to be an invaluable reagent In line with its resistance to anaphylatoxin, agar and peptone, it was found to be refractory to the anaphylactic shock proper It does not seem to be possible to produce a fatal anaphylactic shock in a rat which has been previously sensitized to a given antigen, such as horse serum or egg white If, however, the antigen is diluted with distilled water it will produce a shock And, furthermore, the mere injection of distilled water into a sensitized rat will cause a shock and even death By means of the transfusion method it is possible to show that anaphylatoxin is produced in the circulation of the animal thus injected with distilled water Further, the transfusion of blood from a guinea-pig which has been shocked likewise demonstrates the production in vivo of anaphylatoxin in specific shock

Of equal importance is the further fact that if the serum of a sensitized guinea-pig or rat is mixed with the antigen in vitro, within two or three minutes thereafter it is possible to demonstrate the presence of anaphylatoxin The speed of poison production in this case is the same as with trypanosomes, agar, peptone, inulin, etc Particularly noteworthy is the fact that the addition of distilled water to the serum from a sensitized rat results in an almost instantaneous production of the poison It should be added that the serum of a normal rat behaves in a similar manner when diluted with distilled water, but the reaction is not as rapid It follows from these observations that the matrix of the poison is a very labile constituent of the plasma or serum Its extreme lability is also indicated by the fact that heating of the serum to 50 C for fifteen minutes diminishes or destroys the matrix, since serum thus heated cannot be toxified by the addition of distilled water

When the dog is subjected to specific anaphylactic shock, or is injected with peptone, it gives as one of the characteristic responses a noncoagulable blood Hitherto it has not been possible to produce this condition in the blood of guinea-pigs which have been subjected to specific anaphylactic shock By drawing the blood from the heart of the shocked guinea-pig into a suitable pipet shortly after the second injection of the antigen, we have been able to obtain it in a perfectly incoagulable condition

The foregoing facts demonstrate clearly that, in specific shock, anaphylatoxin is produced in vivo, and further, that this poison is produced at about equal speed when the sensitized serum is brought into contact with the antigen in the test tube The experiments with distilled water, moreover, demonstrate, first, that the poison is not derived from the antigen since no antigen is used, and second, that the poison production is independent of any adsorption reactions since no suspended matter is present It follows, therefore, that the adsorption theories of anaphylatoxin production, as well as the theory of Friedberger, in which the matrix of the poison is located in the nitrogenous constituents of the antigen, are definitively disproved

These points having been established, it was of importance to ascertain whether or not the production of anaphylatoxin was associated with protein cleavage A good indicator of the presence or absence of such cleavage is Van Slyke's method for the determination of aminonitrogen If cleavage occurred, it was reasonable to expect an increase in aminonitrogen, indicating a liberation of amino-acids from the protein complex An extensive series of tests with anaphylatoxin, obtained by the action of agar, inulin or of distilled water showed no increase in aminonitrogen, if anything a slight decrease was observed The production of anaphylatoxin in such tests was very rapid, and apparently reached its maximum within fifteen minutes, after which it persisted in the tube, without increase or decrease, for twenty-four hours or more Assuming that this method affords an indication of cleavage, it follows that no protein cleavage is demonstrable in connection with anaphylatoxin production

EXPLANATION OF THE PRODUCTION OF ANAPHYLATOXIN

This brief presentation of the main facts developed in these investigations suffices to show that anaphylatoxin production and specific anaphylaxis rests on an entirely different basis than has hitherto been supposed The matrix of the poison is always present in the circulating plasma and is also present in normal serum This matrix must be looked on as being very labile, quite as much as if not more so than the fibrinogen of blood In the same way that the labile fibrinogen is changed by a catalyzer, commonly called fibrin ferment, into fibrin, so the matrix is converted through the catalyzing action of substances of utmost diversity into anaphylatoxin The two reactions—blood coagulation and blood toxification—are twin phenomena in which labile substances undergo intramolecular rearrangement resulting in tautomeric modifications, on the one hand, the insoluble fibrin, and on the other, the soluble anaphylatoxin is produced There is no good reason to believe that fibrin results from a hydrolytic cleavage of fibrinogen, neither is there any evidence to indicate that anaphylatoxin is formed by the hydrolysis of a matrix

The disturbance which brings about the transformation of the matrix into poison is readily effected by the addition of almost any alien substance to a serum Thus, bacteria, trypanosomes, organ cells and organ extracts, peptone, agar, starch, inulin, kaolin, silicic acid, barium sulphate, diverse salts, and even distilled water act as inducers or accelerators of this reaction As to the mode of action of these substances, nothing definite can be said, but it is probable that a dispersion of the matrix precedes the tautomeric change

The identical reaction may be produced in vivo by the injection of these totally unlike substances into the circulation of an animal The result is a nonspecific anaphylactic shock In specific anaphylaxis, *the inducing substance is formed by the interaction of the antigen with its antibody* It matters not whether this product forms a visible precipitate, as in the precipitin reaction, or whether it remains in solution It is this formation of a new and alien substance which induces the intramolecular change in the matrix, transforming it into a poison The specificity of the reaction concerns the production of this catalyzer, and not that of the poison

To explain the incoagulability of shock blood, it must be assumed that this inducing agent also reacts with fibrinogen, which it transforms into an incoagulable tautomeric modification Whether or not this new product corresponds to the fibrinoglobulin of Hammarsten cannot be stated It is obvious, however, that the labile constituents of blood must be subjected to renewed scrutiny, and that the old problem of blood coagulation must be approached from a somewhat different standpoint than has been the case in the past The theories of immunity are not a safe guide in the study of coagulation, they have certainly proved anything but useful in the study of anaphylaxis The conception of the formation of an incoagulable tautomer of fibrinogen in anaphylactic shock is also applicable to the puzzling condition of hemophilia The good effects of serum injection in this condition, though temporary, may be due to a reversive action of the serum, if not to that of the alkali present It would be of interest to determine the effect of an alkali treatment in such cases

It may happen in nonspecific shock, as when large doses of rabbit serum, or of distilled water are injected, that the fibrinogen change follows the usual path with thrombosis as a result The fact that in one case the blood is incoagulable while in another it clots more rapidly than usual does not mean that the reactions are entirely different, the trend of tautomerization is merely varied by the conditions affecting the blood mass It is perfectly reasonable to believe that fibrinogen is capable of yielding several tautomers, as fibrin, fibrinoglobulin, that coagulated by heat, and perhaps the incoagulable form mentioned As stated above, the matrix of the poison is very labile, and this fact is suggestive of a possible relation to fibrinogen or to fibrinoglobulin Like fibrinogen, the matrix is capable of existing in several modifications, the native or plasmic form, the highly toxic type or anaphylatoxin, the inactive or inert form resulting by heating at 50 C, and that which is fully coagulated by heat

As regards the nature of anaphylatoxin, it is not possible to make any very definite statement Investigations which are being conducted at present indicate beyond doubt that it is not a simple chemical substance, neither is it a partially hydrolyzed, soluble protein of the type of proteose Rather, it appears to exist as a larger molecular complex than is that of serum albumin, and, moreover, it possesses certain globulin characteristics

TARAXIGEN, TARAXIN AND TARAXY

It will be seen that the phenomenon of anaphylatoxin production, which includes anaphylaxis, is not connected with the problem of immunity except so far as it shows the ready response of a labile blood constituent to an alien substance, neither is it the antithesis of protection, as implied in the term "anaphylaxis" The latter and its offshoot anaphylatoxin are clearly misnomers when viewed in the light of these studies These terms, however, have come into such general use that it is highly probable that they will continue to be employed Nevertheless, the phenomenon is of such great practical importance that it seems to be worth while to suggest a terminology which will express concretely the results of these investigations With the kinship to blood coagulation in mind, it is proposed to designate the matrix of the poison as "taraxigen," and its tautomeric poisonous form as "taraxin" The terms[1] recall the similarity in the reaction to that which occurs in coagulation, when fibrinogen is changed to fibrin "Taraxy" is the disturbed state or condition caused by the poison

It is important to realize from the medical standpoint that inducing substances may develop within the normal animal through some unrecognized cause which may lie in a peculiarity of diet, or in exposure, or in obscure infections, etc As a result, the blood of such an animal will be abnormally toxic because of the presence of anaphylatoxin or taraxin This condition has actually been observed in normal, untreated rabbits A similar condition without doubt is of frequent occurrence in man, and while the amount of poison thus produced may not be sufficient to cause an acute anaphylactic or taraxic shock, it may lead to a subacute or chronic form of intoxication The sudden formation of much anaphylatoxin or taraxin may bring on the explosive effects seen in eclampsia, and perhaps in surgical shock, not to mention other attacks with rapid onset The gradual production and continued presence of such poison may result in the obscure effects noted in connection with some of the so-called autointoxications, and it may lead to anemia, cachexia, etc Lastly, and not the least, it is also to be remembered that a considerable part of the toxic effects in infectious disease is in all probability due to the formation of anaphylatoxin or taraxin In other words, infection leads to taraxy The great and far-reaching importance attaching to this problem will be evident the moment it is realized that the circulating blood, through a variety of agents, may be changed from a beneficial and harmless to an injurious and poisonous state The alien substance is merely the trigger which, so to speak, ignites or explodes the charge contained within the blood vessels It will be seen that this point of view opens up a large field of inquiry

The treatment of taraxy must aim to destroy the anaphylatoxin or taraxin present, and to prevent its further formation It has been shown that alkali not only destroys but also prevents the formation of this poison in the test tube This fact appears to furnish a rational basis for the employment of alkali or alkali-producing salts, in the treatment of such conditions The beneficial effect of alkali administration in acidosis and in shock may consist in bringing about a reversion to the normal tautomeric state of the taraxin present This may also explain the striking results following the injection of normal serum in hemophilia, and of alkalinized blood in acidosis (Gettler and Lindeman)[2]

The administration of sodium bicarbonate, or preferably sodium acetate in doses of from 3 to 5 gm, dissolved in about half a glass of water, and given at intervals of from half an hour to an hour during the day, has resulted in marked beneficial effect in three severe cases in which chronic taraxy or anaphylatoxic poisoning was believed to exist These cases were salvarsan poisoning (Dr Wile), ascending paralysis (Dr Camp), and multiple exudative erythema (Dr Wile)

The immediate object in mind in this treatment was to raise the alkalinity of the blood to *a maximal level and to keep it there* for the duration of the tests The study of the action of alkali under diverse laboratory as agar, peptone and bacteria, merely increase the amount of this poison The fact that preclot blood, or defibrinated blood is more toxic than its serum is probably due to the presence of the catalyzer, formed in the precoagulation stage, which induces additional poison production when such blood is injected into the recipient The further observation that a defibrinated blood, kept at 60 C, coagulates much more rapidly that the clear serum indicates the presence of such disturbing or catalyzing agent

---

[1] The derivation is from the Greek ταραξις a disturbance

[2] Gettler A. O and Lindeman Edward A New Method of Acidosis Therapy The Journal A M. A. Feb 24 1917 p 594

In the study of specific anaphylaxis, the rat was found to be an invaluable reagent In line with its resistance to anaphylatoxin, agar and peptone, it was found to be refractory to the anaphylactic shock proper It does not seem to be possible to produce a fatal anaphylactic shock in a rat which has been previously sensitized to a given antigen, such as horse serum or egg white If, however, the antigen is diluted with distilled water it will produce a shock And, furthermore, the mere injection of distilled water into a sensitized rat will cause a shock and even death By means of the transfusion method it is possible to show that anaphylatoxin is produced in the circulation of the animal thus injected with distilled water Further, the transfusion of blood from a guinea-pig which has been shocked likewise demonstrates the production in vivo of anaphylatoxin in specific shock

Of equal importance is the further fact that if the serum of a sensitized guinea-pig or rat is mixed with the antigen in vitro, within two or three minutes thereafter it is possible to demonstrate the presence of anaphylatoxin The speed of poison production in this case is the same as with trypanosomes, agar, peptone, inulin, etc Particularly noteworthy is the fact that the addition of distilled water to the serum from a sensitized rat results in an almost instantaneous production of the poison It should be added that the serum of a normal rat behaves in a similar manner when diluted with distilled water, but the reaction is not as rapid It follows from these observations that the matrix of the poison is a very labile constituent of the plasma or serum Its extreme lability is also indicated by the fact that heating of the serum to 50 C for fifteen minutes diminishes or destroys the matrix, since serum thus heated cannot be toxified by the addition of distilled water

When the dog is subjected to specific anaphylactic shock, or is injected with peptone, it gives as one of the characteristic responses a noncoagulable blood Hitherto it has not been possible to produce this condition in the blood of guinea-pigs which have been subjected to specific anaphylactic shock By drawing the blood from the heart of the shocked guinea-pig into a suitable pipet shortly after the second injection of the antigen, we have been able to obtain it in a perfectly incoagulable condition

The foregoing facts demonstrate clearly that, in specific shock, anaphylatoxin is produced in vivo, and further, that this poison is produced at about equal speed when the sensitized serum is brought into contact with the antigen in the test tube The experiments with distilled water, moreover, demonstrate, first, that the poison is not derived from the antigen since no antigen is used, and second, that the poison production is independent of any adsorption reactions since no suspended matter is present It follows, therefore, that the adsorption theories of anaphylatoxin production, as well as the theory of Friedberger, in which the matrix of the poison is located in the nitrogenous constituents of the antigen, are definitively disproved

These points having been established, it was of importance to ascertain whether or not the production of anaphylatoxin was associated with protein cleavage A good indicator of the presence or absence of such cleavage is Van Slyke's method for the determination of aminonitrogen If cleavage occurred, it was reasonable to expect an increase in aminonitrogen, indicating a liberation of amino-acids from the protein complex An extensive series of tests with anaphylatoxin, obtained by the action of agar, inulin or of distilled water showed no increase in aminonitrogen, if anything a slight decrease was observed The production of anaphylatoxin in such tests was very rapid, and apparently reached its maximum within fifteen minutes, after which it persisted in the tube, without increase or decrease, for twenty-four hours or more Assuming that this method affords an indication of cleavage, it follows that no protein cleavage is demonstrable in connection with anaphylatoxin production

EXPLANATION OF THE PRODUCTION OF ANAPHYLATOXIN

This brief presentation of the main facts developed in these investigations suffices to show that anaphylatoxin production and specific anaphylaxis rests on an entirely different basis than has hitherto been supposed The matrix of the poison is always present in the circulating plasma and is also present in normal serum This matrix must be looked on as being very labile, quite as much as if not more so than the fibrinogen of blood In the same way that the labile fibrinogen is changed by a catalyzer, commonly called fibrin ferment, into fibrin, so the matrix is converted through the catalyzing action of substances of utmost diversity into anaphylatoxin The two reactions—blood coagulation and blood toxification—are twin phenomena in which labile substances undergo intramolecular rearrangement resulting in tautomeric modifications, on the one hand, the insoluble fibrin, and on the other, the soluble anaphylatoxin is produced There is no good reason to believe that fibrin results from a hydrolytic cleavage of fibrinogen, neither is there any evidence to indicate that anaphylatoxin is formed by the hydrolysis of a matrix

The disturbance which brings about the transformation of the matrix into poison is readily effected by the addition of almost any alien substance to a serum Thus, bacteria, trypanosomes, organ cells and organ extracts, peptone, agar, starch, inulin, kaolin, silicic acid, barium sulphate, diverse salts, and even distilled water act as inducers or accelerators of this reaction As to the mode of action of these substances, nothing definite can be said, but it is probable that a dispersion of the matrix precedes the tautomeric change

The identical reaction may be produced in vivo by the injection of these totally unlike substances into the circulation of an animal The result is a nonspecific anaphylactic shock In specific anaphylaxis, *the inducing substance is formed by the interaction of the antigen with its antibody* It matters not whether this product forms a visible precipitate, as in the precipitin reaction, or whether it remains in solution It is this formation of a new and alien substance which induces the intramolecular change in the matrix, transforming it into a poison The specificity of the reaction concerns the production of this catalyzer, and not that of the poison from the increasing intimacy of communication between this country and those tropical localities where the parasites referred to and the pathologic conditions which they produce have been long prevalent It is probably not generally known, for example, that amebic dysentery has been reported from some thirty-five of the states which compose this country

Balantidic dysentery is also encountered at intervals These diseases in temperate climates do not in most cases present the severe symptoms which characterize them when met with in the tropics Thus, amebic dysentery rarely manifests itself as a true acute dysentery, but rather as a chronic and painless, but persistent diarrhea, in which the stools may at times contain small amounts of blood and mucus In some sense this chronicity, which we observe in so large a proportion of these cases in this country, is a distinctly unfavorable factor, in that patients often do not seek medical attention until, following the slowly progressive decline in general health which results from the protozoal infection, they fall victims to acute intercurrent diseases, which not infrequently in such instances result at least in needless sacrifices of life Under these circumstances the symptoms resulting from the superadded acute infection overshadow completely or in part those of the preexisting chronic infection, and the latter is never diagnosed

That any cases similar to those described should ever be allowed to progress as far as they often do without receiving proper treatment is a pity, but until the microscopic examination of the stools of all patients from whom even the vaguest history of gastro-intestinal disturbances can be obtained becomes as much a matter of routine as the chemical examination of the urine, no decrease in the number of such cases can be expected, at least in those localities in which failure to accord proper treatment to the water supply prior to its distribution makes it impossible to guarantee its purity and in which the unsanitary system of fertilizing growing vegetables with human feces is in vogue Those cases which we have here reported and those of amebic dysentery which we have encountered in increasing numbers during the last two years have served to deepen in us the conviction that it is nothing short of a duty on the part of our medical schools to give more attention than most of them at present do to the protozoal infections with which this paper concerns itself, to the end that isolated and relatively infrequent though the cases may be in the northern and western states, they may yet be recognized and efficiently treated when they do occur, before there has been brought about so great a decrease in the general vitality as to render destruction of life the probable outcome of an acute bacterial infection from which the individual might otherwise be reasonably expected to recover

525 Park Avenue.

False Teeth Five Years in Alimentary Canal.—The *Gazeta Medica da Bahia* relates that the Roentgen rays showed the set of false teeth in the esophagus soon after they had been swallowed Attempts to extract the foreign body failed and the patient refused to permit an operation but the foreign body was inspected from time to time with the screen After two years in the esophagus it passed into the stomach where it remained three years It caused no appreciable disturbance at any time except slight discomfort as the food passed the foreign body in the esophagus and later when the stomach was empty At the end of the fifth year it passed on into the bowel and was then soon expelled. The man ate the usual diet throughout

---

AN ANTIPOLIOMYELITIS HORSE SERUM

PRELIMINARY REPORT *

M. NEUSTAEDTER, M D, Ph D
AND
E. J BANZHAF, Ph.D
NEW YORK

The question of the production of a horse serum that will have protective and curative properties against the virus of poliomyelitis has occupied the attention of many investigators So far as we can discover no one has reported the discovery of a horse serum that will either neutralize the virus in vitro or protect an animal against the virus of poliomyelitis Flexner,[1] who was the first to attempt to produce an immune horse serum, reports

> It has, for instance, been found that the horse does not readily respond even to large injections of filtrates carrying the active virus with the development of immunity principles within the blood It is true that our experiments are restricted for the present to a single horse, the blood serum of which after many months of treatment, had no restraining effect on the virus either in vitro or within the body

From all the experimental and clinical data at hand it seems to be fairly probable that the exotoxin of the germ is of a negligible quantity and intensiveness The destructive action of the virus seems to be due to the virulence of the germ and its ability to multiply rapidly It seemed feasible to us, therefore, to inoculate a horse with the poliomyelitis endotoxin, if recoverable, on the theory that it might potentially immunize the animal, and then continue with injections of filtrates containing the germ

Since cultural methods so far devised by Flexner and Noguchi are impracticable to obtain any exotoxin or endotoxin, we have attempted to obtain the endotoxin by digesting the germ in the filtrate of a brain and cord emulsion with a proteolytic ferment For this purpose we have used trypsin made for us by Fairchild Brothers and Foster in 10 per cent glycerin solution Although we had no demonstrable evidence that the endotoxin was obtained, we nevertheless proceeded to prepare, in a manner indicated below, the filtrates of emulsions of cords and brains of children who had died of poliomyelitis, and injected our horse as follows

Aug 31, 1916, a sterile filtrate—through a Heim filter—of a 10 per cent. emulsion of human brain and cord was obtained and 60 c.c. were mixed with 2 c c. of the Fairchild trypsin solution and incubated for three hours at 36 C., and 0 4 per cent. tricresol added after the three hours' incubation, so as *to stop the further action of the trypsin.* Previous to the addition of trypsin we found the filtrate to be slightly alkaline to litmus paper Some of the trypsin solution used was always inoculated into ascitic broth and ascitic agar, and found sterile after several days' incubation.

September 5 5 c c. of the trypsinized filtrate were diluted to 50 c.c. with physiologic sodium chlorid solution and injected into the horse in five different places (lower neck and shoulder blade) 10 c.c to each place. September 8, 8 c.c diluted as above, were injected in five places, September 11, 15 c c., and September 14, 20 c.c.

A second lot of filtrate of 100 c.c. was treated as the first, and injections continued as before September 17, 25 c.c., September 20, 30 c.c., and September 23, 40 c c.

---

* From the Research Laboratories Department of Health City of New York, Dr William H Park, director

[1] Flexner Simon The Contribution of Experimental to Human Poliomyelitis The Journal A. M A. Sept. 24 1910 p 1112

A third lot of 500 c c was prepared with trypsin in the proportion of 1 trypsin to 50 filtrate and incubated for one hour at 36 C, and then 0 4 per cent tricresol added Of this we injected, September 26, 50 c c, without diluting any further, September 29, 60 c c, October 2, 75 c c, October 5, 85 c c, and October 8, 100 c c

A fourth lot of 1,300 c c of filtrate was prepared with trypsin in the proportion of 1 100 and incubated for one hour at 36 C and 0 4 per cent tricresol added Through unavoidable delay in its preparation we were not able to inject the horse for about two weeks after the last injection Of this lot we injected October 21, 125 c c, October 24, 150 c c, October 27, 175 c c, October 30, 200 c c., November 2, 225 c c, and November 5, 250 c c

A fifth lot of 1,200 c.c of filtrate of a 20 per cent emulsion was treated as the fourth lot with trypsin and tricresol, and injected as follows November 8, 175 c c, November 11, 200 c c, November 14, 225 c c, and November 17, 225 c c

Injections were now discontinued for a trial bleeding Nov 23, 1916, the horse was bled, and we received 1,200 c c of serum This we passed through a Berkefeld filter, inoculated some of it into ascitic broth and ascitic agar, and, after finding it sterile after several days' incubation, added to it chloroform as a preservative and used it for our experiments We might mention that the condition of the horse throughout the treatment was apparently normal

Jan 10, 1917, we prepared a 5 per cent emulsion of the cord and brain of monkeys infected and brought down with a very potent virus of poliomyelitis, which we obtained from the Rockefeller institute through the courtesy of Dr Amoss This suspension we filtered through sterile paper pulp and added to it 0 4 per cent tricresol, and without adding any trypsin, we continued to inject the horse as follows January 18, 50 c c, January 20, 75 c c, January 22, 100 c c, January 24, 125 c c, January 26, 150 c c., January 28, 175 c c, January 30, 200 c c, February 1, 225 c.c, February 3, 250 c c, February 5, 275 c c, and February 7, 300 c c

January 22, after the third injection with the filtered suspension of the monkey virus, the temperature of the horse rose to 103 4 F seven hours after the injection, and subsided within twenty-four hours After each injection thereafter the temperature would rise and subside within twenty-four or thirty-six hours February 9, the horse was unable to stand up, and his temperature was subnormal No further injection was attempted He then received a saline infusion of a temperature of 105 F, February 10, in the forenoon, and after he had recovered somewhat, about 4 liters of blood were withdrawn

The horse died on the afternoon of the same day The necropsy revealed some congestion of the lungs, the other viscera being normal Microscopically there were no cord changes

PROTOCOL OF EXPERIMENTS WITH THE SERUM

Experiment 1—Dec 6, 1916, Monkey 3 (mangabey) was injected intracerebrally with 0 5 c c. of a 5 per cent suspension of an eighth generation monkey virus, and at the same time 20 c c of the serum intramuscularly Twenty-four hours afterward, daily injections were begun of 3 c c of the serum intraspinally and 17 c c intramuscularly These were given for seven days, when it was considered wise to cease treatment The animal remained well up to December 17, four days after the last treatment, when it seemed ill at ease December 18, the right extensor cruris was weak On this day he received 3 c c of the serum intraspinally and 17 c c intramuscularly December 19, he seemed to favor the left leg also On this day and the following he received 3 c c of the serum intraspinally and 17 c c subcutaneously The animal began to improve in the afternoon of December 19, and on January 7 was completely well and continues well today, four months after the inoculation

Control—On the same day Monkey 2 (*Macacus rhesus*) was injected intracerebrally with 0 5 c.c of the same suspension of the same virus This animal died in convulsions within six days and six hours Histopathologic lesions were characteristic of poliomyelitis

Experiment 2—Monkey 4 (mangabey), baby of Monkey 3, was injected intracerebrally, Dec 31, 1916, with 0 9 c.c of a mixture prepared as follows Through the courtesy of Dr Amoss we received from the Rockefeller Institute the cord of a monkey that died, Dec 29, 1916, infected with a very potent virus, of which 0 2 c c of a 5 per cent suspension proved a fatal dose Three-tenths c c of a 5 per cent suspension of this cord was mixed with 0 6 c c of the serum and incubated for two hours at 37 C and left in the refrigerator for twenty-two hours This entire mixture was injected into the small animal It has remained well ever since

Experiment 3—Monkey 6 (rhesus) was injected, Jan 4, 1917, intracerebrally with 0 5 c c of a 5 per cent suspension of the Rockefeller virus Forty-eight hours after the injection, the left forepaw was paretic On this day, January 6, it received 3 c c of the serum intraspinally and 15 c.c intramuscularly, January 7, 3 c c intraspinally and 15 c c intramuscularly, January 8, 4 c c. intraspinally and 27 c c. intramuscularly, and January 9, 2 c c intraspinally The animal was very ill, January 8, refused food, and was lying on the floor of the cage, occasionally it sat up, with the right foreleg paralyzed, later in the day both forelegs became completely paralyzed, the muscles of the neck were involved, and the animal was unable to swallow Both hind legs were in good condition January 9, all four limbs were paralyzed, and the animal was unable to take food The animal died, January 10, at 4 a m Macroscopic and microscopic findings were characteristic of poliomyelitis

Normal Horse Serum Control for Monkeys 4 and 6—Monkey 5 (rhesus) was injected, January 4, intracerebrally with 0 5 c c of the same suspension of the Rockefeller virus Forty-eight hours after the inoculation, we began treating it with normal horse serum in the same manner as Monkey 6, with daily injections of 3 c c intraspinally and 17 c c intramuscularly It became weak in the hind limbs two days after the virus inoculation, and was totally paralyzed in the legs on the fifth day It was killed, and the macroscopic and microscopic findings were characteristic of poliomyelitis

Experiment 4—Monkey 7 (rhesus), Jan 12, 1917, was injected intracerebrally with 0 9 c c of the following mixture Three-tenths c c of a 5 per cent suspension of the cord and brain of Monkey 5 was mixed with 0 6 c c of the serum and incubated for two hours at 37 C and then left in the refrigerator for twenty-two hours The animal remained well till January 18 at 4 p m, when it seemed rather ill, preferring to lie on the floor of the cage The following day it seemed to have improved generally, but was totally blind The left pupil near the site of the injection was markedly dilated, and neither of the pupils responded to the stimulus of light From the wound and also from the right nostril oozed a mucopurulent discharge The animal ate and drank heartily, but was very warm January 21, it was entirely well and walked about, but carefully searched its place like a blind animal, it was entirely comfortable and ate well, but remained blind The high temperature was gone The examination of the fundi oculi revealed a double postneuritic optic atrophy The monkey was chloroformed, January 22, and examined at necropsy Microscopically there was a purulent meningitis of the entire cerebrospinal axis A streptococcus was isolated from all parts of the brain and cord There was no evidence of a poliomyelitis lesion anywhere.

Experiment 5—Monkey 8 (*Macacus rhesus*) was injected intracerebrally, Jan 19, 1917, with 0 15 c c of a 5 per cent suspension of the brain and cord of Monkey 6, and fifty minutes later it received 3 c c of the serum intraspinally and 17 c c intramuscularly, and a like treatment daily up to and including January 25, which makes a total of seven injections The animal being perfectly well, January 26, we concluded to cease treatment January 27, however, it appeared restless, so we gave it 3 c c of the serum intraspinally and 15 c c intramuscularly The monkey was perfectly well on the evening of that day and also on the morning of the following day In the afternoon it suddenly became paralyzed in all extremities and was unable even to swallow water It was at once chloroformed and examined Lesions in the cord and brain stem were characteristic of poliomyelitis

Control for Monkey 8.—Monkey 14 (rhesus), Jan. 19, 1917, was injected intracerebrally with 0.15 c.c. of the same suspension as Monkey 8. This animal had received injections of an emulsion of cord and brain of a child that died of poliomyelitis, but remained well. January 24, five days after our inoculation, it became paralyzed in the left forearm and favored the right leg. January 26 it was paralyzed in the left forearm and weak in the left leg. January 28, it was paralyzed all over and in a dying condition. The necropsy showed characteristic lesions of poliomyelitis.

Experiment 6.—Monkey 9 (*Macacus rhesus*) was injected intracerebrally, March 3, 1917, with the following mixture: Two-tenths c.c. of a 5 per cent. suspension of a very potent Rockefeller virus No. 88, which we passed through ten generations, was mixed with 0.8 c.c. of the serum of the second bleeding, and incubated at 37 C. for two hours and left in the refrigerator for twenty-two hours. The animal never showed any ill effects, and is perfectly well today, four weeks after inoculation.

Experiment 7.—Monkey 93 (rhesus) was injected intracerebrally, April 13, 1917, with 0.4 c.c. of the following mixture: Equal parts of the serum of the second lot and a 5 per cent. suspension of the Rockefeller virus were mixed and incubated at 37 C. for two hours, and then left in the refrigerator for twenty-two hours. The animal was not ill at any time, and is perfectly well now, four weeks after the injection.

Experiment 8.—Monkey 100 (rhesus) was injected intracerebrally, April 25, 1917, with 0.3 c.c. of the following mixture: One part of the serum of the second lot and two parts of a 5 per cent. suspension of the Rockefeller virus were incubated at 37 C. for two hours, and then kept in a refrigerator for twenty-two hours. The animal was well up to May 2, when it appeared ill, sitting in the corner of the cage with its head down. On being approached, it would stand up and be quite active. It continued in this mood until May 5, but on that day it refused food. At no time was it paralyzed or even weak in any limb. The wound at the site of injection never healed. May 6, eleven days after the injection, it was found dead. The necropsy revealed a marked congestion of the vessels of the brain; the other viscera were normal. Microscopically there was no evidence of any lesion of poliomyelitis. The cord was found perfectly normal.

Control for Monkeys 9, 93 and 100.—Monkey 11 (rhesus) was injected intracerebrally May 5 with 0.3 c.c. of the same suspension of the Rockefeller virus. May 9, the animal was ill. May 11, the hind legs were paralyzed.

SUMMARY

The five neutralization experiments were positive without exception. The serum protected one monkey completely against a rather slowly acting virus, of the eighth generation, originally recovered from a human patient. The experiment in Monkey 6 was rather severe, to use Dr. Park's phrase, since two and one half fatal doses of a most virulent virus were injected and the treatment with the serum was begun forty-eight hours after inoculation, when a paresis was already evident, and the case terminated as a bulbar one. The experiment in Monkey 8 was perhaps less severe, but although the time of the paralysis was delayed by two days over the control, which was somewhat immunized some months previously, the experiment was a negative one.

On account of the scarcity of monkeys we could not make as many experiments as we would wish to, so we report the facts without drawing any conclusions. We feel, however, that we are justified in using the serum in human cases especially when human serum is unobtainable, and shall report when a sufficient number have been treated.

1215 Park Avenue—Foot of East Sixteenth Street.

ACTION OF BACTERIA AND DRESSING SOLUTIONS ON CATGUT LIGATURES

KENNETH TAYLOR, M.A., M.D.
Director Robert Walton Goelet Research Fund, American Red Cross Hospital of Paris
PARIS

The durability of catgut in suppurating wounds is of importance chiefly in connection with the use of ligatures for hemostasis. Secondary hemorrhage is a frequent complication of shell and rifle ball wounds, and is a cause of a considerable portion of the deaths and amputations among these patients in many base hospitals. When not caused by a low clotting index of the blood (which is of rare occurrence), hemorrhages of this character are generally due to one of the following factors:

1. Loosening of the fibrin plug in the injured vessel.
2. Erosin or softening of the vessel wall by mechanical means, such as drainage tubes or fragments of bone, by the digestive action of infective organisms, such as the gas bacillus, or by the dressing solution employed in the treatment of the wound.
3. Breaking or slipping of the ligature which closes some important vessel.

It is my intention in this paper to deal only with the failure of the ligature.

There are two things to be investigated in this connection: first, the effect of certain infective organisms, which, in the process of their growth, may attack and erode the catgut; second, the effect of various dressing solutions which might weaken the catgut or cause the slipping of the knot.

ACTION OF BACTERIA

To obtain some information on this point, Mr. H. Larcher of this laboratory has carried out the following experiments:

Chromic catgut No. 0 and No. 1, and plain catgut No. 0 and No. 1 were used throughout.[1] A number of pieces of each, of approximately the same length, were dropped into forty-eight hour meat cultures of the *B. aerogenes-capsulatus*, the *B. malignans-oedematis*, the Hibler bacillus, *Streptococcus pyogenes*, *Staphylococcus aureus*, the *B. pyocyaneus*, the *B. proteus*, and the *B. lactis-aerogenes*. Each culture was incubated, and the condition and tensile strength of the catgut examined from time to time and compared with controls.

The results showed no material alteration in the strength or elasticity of the catgut after seventy-two hours of incubation in any of the cultures with the exception of that of the gas bacillus. In this case a very active digestion of the catgut consistently occurred — noticeable after forty-eight hours and progressing rapidly from that time on. After seventy-two hours' incubation, the strength of both No. 0 chromic and plain catgut was greatly diminished, and within four days they were frequently eroded through. All four sizes were almost completely digested by the seventh day, only a few fragments remaining. As may be expected, the small sized catgut was eroded more quickly than the large. The chromic catgut appeared to be eroded, if anything, more rapidly than the plain. The accompanying illustration shows the condition of the catgut from one tube incubated with the gas bacillus as compared with controls of the same sizes.

---

[1] The plain gut was that made by Messrs. Johnson & Johnson; the chromic that made by Triollet.

EFFECT OF VARIOUS ANTISEPTICS

Pieces of the same sizes and qualities of catgut as used in the previous experiment were tied together by a double surgical knot and incubated in one of the following solutions neutral solution of chlorinated soda, Carrel-Dakin, betanaphthol, 0 5 per cent solution in 0 1 per cent sodium hydroxid, sodium hydroxid solution, 1 per cent , mercuric chlorid, 1 10,000, phenol (carbolic acid), 1 per cent , sodium chlorid, 5 per cent , sodium chlorid, 0 87 per cent , acetic acid, 1 per cent , sodium perborate, 1 per cent, and distilled water After three days the pieces of catgut were removed from each tube, examined and measured The percentage of shrinkage was noted and the tensile strength then tested by adding weights to a hook attached by a loop to the lower end of the ligature Half a minute was allowed between the addition of each pound weight in order to measure the stretching of the catgut before the break occurred It was expected that considerable alteration in the tensile strength and the elasticity of the catgut might result from treatment with some of the solutions Both, however, remained consistently within a slight limit of variation, as did also the shrinkage of the catgut and the stretching which it would bear before breaking In both controls and treated specimens

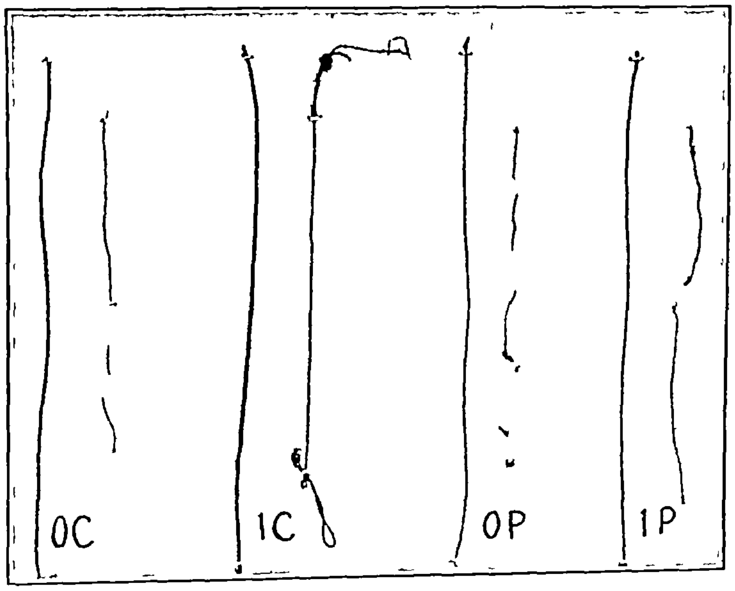
No 0 chromic catgut withstood a weight of 4 to 5 pounds

No 0 plain catgut withstood a weight of 2 to 3 pounds

No 1 chromic catgut withstood a weight of 6 to 8 pounds

No 1 plain catgut withstood a weight of 4 to 5 pounds

The chromic catgut, both sizes, showed a shrinkage of about 4 per cent of its original length as a result of treatment, the plain catgut an average of from 2 to 3 per cent As is to be expected from its greater strength, the chromic catgut allowed of a greater degree of stretching before breaking, averaging from 20 to 25 per cent of its length before treatment, while the plain catgut averaged from 15 to 18 per cent, the small sizes of each being usually represented by the lower figure



Action of the gas bacillus on catgut *0* and *1* refer to size, *P*, plain, *C*, chromic

One very important point was observed It was found impossible to test the tensile strength of the pieces of catgut containing a surgical knot which were in the neutral solution of chlorinated soda, because in every case the knot slipped on the addition of a weight below 2½ ounces A treble and quadruple knot failed to prevent this result, and the tensile strength and stretching were therefore estimated on pieces of catgut without knots This slipping of the surgical knot was also noticed occasionally in the case of the acetic dressing and the sodium perborate dressing With both the latter solutions about one in ten showed slipping of the knot before the catgut broke, but usually after the addition of a weight of several pounds This slipping of the knot in the case of the neutral solution of chlorinated soda was evidently due to a slimy deposit which invariably occurred, and catgut bathed in the solution for even so short a time as fifteen minutes usually failed to hold a weight of 1 pound

It is possible that this effect of the neutral solution of chlorinated soda on ligatures (of catgut) may be responsible for the frequency of secondary hemorrhages occurring under this treatment, as well as the loosening of the fibrin plugs thrombosing the injured vessels and the softening of the arterial wall to which it is usually ascribed That the slipping of the surgical knot is due to the hypochlorite present in the solution, and not to the fact that it is a strongly alkaline solution, is suggested by the fact that the solution of sodium hydroxid and the betanaphthol dressing (the latter of which is approximately of the same alkalinity as the neutral solution of chlorinated soda) did not produce this effect

The other factor in the failure of ligatures which was observed in these experiments was the erosive action of the gas bacillus on them This bacillus is also a frequent cause of hemorrhage, through its digestive action on the muscle of the arterial walls

The neutral solution of chlorinated soda possesses a very low bactericidal value against the gas bacillus, and favors in addition the other chief causes of arterial escape, namely, the loosening of fibrin plugs and the softening of the vessel walls Thus, in a wound infected by the gas bacillus and treated with hypochlorite solutions, all the factors combine to favor hemorrhage

SUMMARY

Among the species of bacteria considered in these experiments, only one, the *B aerogenes-capsulatus* of Welch, attacked and eroded catgut ligatures

None of the dressing solutions tested altered the tensile strength or elasticity of the catgut One solution, the neutral solution of chlorinated soda, invariably caused slipping of the surgical knot

The neutral solution of chlorinated soda would appear, from the experimental evidence, to be contraindicated in cases in which important blood vessels are exposed in the wound, and especially if such a wound shows an active infection by the gas bacillus

6, rue Piccini, Paris (XVI^{e})

Tell the Patient—Before the discovery of the fact that tuberculosis is a communicable disease there was greater reason for keeping the diagnosis secret Before its curability was established it was a serious thing to tell an individual that he had tuberculosis, for it meant the pronouncing of his death sentence Today the withholding of this information pronounces the death sentence, not only on the afflicted but also on some of his friends and dear ones —S J Deehan, M D, *Monthly Bulletin*, Philadelphia Department of Public Health and Charities

POLIOMYELITIS

SOME FEATURES IN CITY PREVALENCE

CHARLES V. CRASTER, M.D., D.P.H.
Health Officer
NEWARK, N. J.

HISTORY

The wave of infantile paralysis of 1916 appears to have been the crest of a prevalence curve which has been increasing in height since 1907, in which year the city of New York experienced an epidemic of 2,500 cases. This was the first large visitation of poliomyelitis in the United States.

TABLE 1.—DISTRIBUTION OF CASES

Month	Cases	Deaths
July	327	97
August	883	226
September	150	40
Total	1,360	363

It is probable that a fresh impetus was given to the disease in America from that date as a result of direct infection brought from Europe, for the reason that the unusual prevalence of poliomyelitis in Norway and Sweden in 1904 and 1905 spread rapidly to the contiguous countries.

It is certain that prior to 1907 poliomyelitis had not shown the same disposition to spread widely among exposed populations, and that the rural population suffered more than that of the cities. The cases in Louisiana in 1841, recorded by Colmer,[1] were few in number. The only epidemic of large size on record previous to 1907 was that of Rutland, Vt.,[2] in 1894, in which there were 132 cases and eighteen deaths. The increase in the spreading power of the disease within recent years may be explained on the assumption that a new and powerful virus has been at work among a susceptible population.

It is unlikely that any modern living conditions are factors which are producing a hypersusceptibility. Be that as it may, it is evident that since 1907 the disease has established itself throughout the United States. In 1910 it was reported as being present in thirty-six states of the Union, in that year there were 5,093 cases and 825 deaths.[3]

For the reason that the epidemiology of poliomyelitis is sufficiently known to establish its status as a contagious disease, it was natural to expect that Newark would not escape infection when the disease became epidemic in New York during the last week of June, 1916.

The two cities are separated by less than thirty minutes' journey by rail, and there are many similarities to New York in the make-up of Newark's mixed population of 400,000.

This conjecture was verified by subsequent events, and there is every reason to suppose that the invasion of Newark by the disease was encouraged by the ready and accessible transit facilities between the two cities.

Statistics show that poliomyelitis is constantly present in cities as well as in rural communities in small foci of prevalence. This endemic type, however, is of low virulence, there is little inclination to spread unduly among the population, and the mortality is low. In the six years previous to 1916 there were ninety-five cases of infantile paralysis reported in Newark with four deaths, a case mortality of a little more than 4 per cent.

The monthly incidence of poliomyelitis in Newark in 1916 corresponded to the observations of Lovett and Richardson in Massachusetts in 1909 and 1910.

In the three months of July, August and September, 1916, there were 1,360 cases of the disease reported in Newark, with 363 deaths, a case mortality of 26.3 per cent.

The incidence curve was highest during the week ending August 12, when 260 cases were reported. The highest case mortality was in the third week of July when 37.5 per cent. of the cases had a fatal termination. After this date the decline in incidence and mortality was consistent, so that in the last week of September there were but twelve cases and one death.

The highest weekly prevalence of poliomyelitis—August 12—was accompanied by a mean temperature of 76 F., the highest but one of all the summer, and a mean humidity of 69 per cent., the total rainfall for the week was also low. During the week previous to the highest incidence, the highest mean temperature and the least rainfall of the whole summer occurred, and the mean humidity at the same time was low.

TABLE 2.—POLIOMYELITIS CASES AND DEATHS BY SEX AND AGE AT NEWARK, N. J., JULY 3 TO SEPT. 30, 1916, INCLUSIVE

Ages	Males		Females		Total		Case Mortality
	Cases	Deaths	Cases	Deaths	Cases	Deaths	
1 month	2	2	1	1	3	3	100.0
2 months	7	3	5	1	12	4	33.3
3 months	4	1	3	0	7	1	14.3
4 months	9	4	4	0	13	4	30.8
5 months	5	3	3	1	8	4	50.0
6 months	12	7	12	3	24	10	41.7
7 months	12	5	9	5	21	10	47.6
8 months	11	4	9	0	20	4	20.0
9 months	12	1	10	1	22	2	9.1
10 months	13	4	13	6	26	10	38.5
11 months	15	4	11	1	26	5	19.2
Under 1 year	102	38	80	19	182	57	31.3
1 year	187	50	128	43	315	93	29.5
2 years	169	56	125	26	294	82	27.9
3 years	137	30	83	15	220	45	20.5
4 years	79	19	50	14	129	33	25.6
Under 5 years	674	193	466	117	1140	310	27.2
5 years	39	9	31	7	70	16	22.9
6 years	22	7	24	6	46	13	28.3
7 years	11	1	15	1	26	2	7.7
8 years	11	0	3	0	14	0	0.0
9 years	4	2	7	1	11	3	27.3
From 5-9 yrs	87	19	80	15	167	34	20.4
10-14 years	14	6	13	6	27	12	44.4
15-19 years	2	1	5	0	7	1	14.3
20-24 years	3	1	4	3	7	4	57.1
25-29 years	1	1	3	0	4	1	25.0
30-34 years	1	0	1	0	2	0	0.0
35-39 years	5	1	0	0	5	1	20.0
40-44 years	1	0	0	0	1	0	0.0
Total all ages	783	222	572	141	1360	363	26.7

The case mortality throughout the epidemic, indicating perhaps a fluctuation in the virulence of the infecting germ, varied considerably during the three months in question. Apparently there was an initial high mortality for the week ending July 22, 37.5 per cent. of the cases. A high mark was reached again in the week ending September 9, 35.5 per cent. of the cases, and again for the week ending September

---

[1] Colmer: Jour. Med. Sc., January 1843.

[2] Caverly: Med. Rec., New York, 1894.

[3] Annual Report of U. S. Public Health and Marine Hospital Service, 1911, p. 236.

23, when 33 3 per cent of the cases had a fatal termination

WARD DISTRIBUTION

The first case of epidemic poliomyelitis appeared, July 3, in the Tenth Ward (Fig 1) By July 8, the end of the first week of the epidemic, there were ten cases reported from this ward as well as two from the Thirteenth Ward, and one each from the Fourth and Fourteenth Wards The Fourth Ward is contiguous to the Tenth The Thirteenth and Fourteenth Wards are separated from the Tenth by three city wards

From this it would seem that the infection was of a multiple nature and arose from more than the one focus in the Tenth Ward The appearance of the pin map of the first hundred cases (Fig 1) suggested the existence of two areas of prevalence A primary area with the tenth ward as a starting point, which eventually embraced the Fifth and Twelfth Wards, and a secondary area, sharply defined, which included a very congested and thickly populated neighborhood, comprised the Third, Fourteenth, Thirteenth, Sixth, Seventh, Fifteenth and Sixteenth Wards (Fig 2)

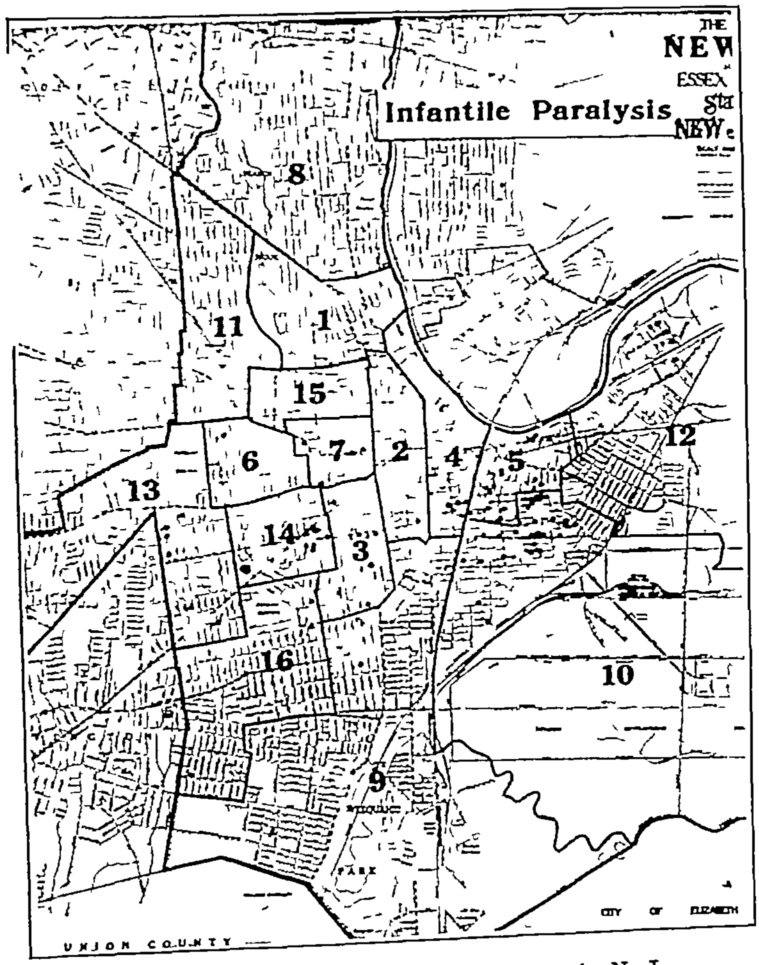


Fig 1—The first hundred cases at Newark, N J

Some areas especially noticeable in the second pin map indicate a division into even smaller groups, notably one of seventeen cases sharply circumscribed in the Twelfth Ward (northeast corner, Fig 2), one of fifteen cases at the outer boundary of the Eighth Ward (north part, Fig 2), and another one of twenty-three cases in the eastern side of the Thirteenth Ward

In the primary area, the first to become infected, the Tenth Ward, has a population consisting of Italians, Russians, Poles and Polish Jews These people are junk dealers, rag pedlers, laborers and keepers of small stores, there are also a few factories in this area The secondary area is made up of a population comprising Russian and Polish Jews, with some Italians and Germans Every kind of small family industry is carried on in the homes in this section, which is probably the most congested part of the city There are many tenement houses, the sanitary conditions of which are not of the best

The Tenth Ward, infected first, attained its maximum of cases in the week ending July 15, after which the prevalence rapidly declined, showing a deficiency of suitable epidemic material The case mortality, however, was high, 37 5 per cent, the second highest of all the wards The picture presented in the ward map shows how the cases rose gradually to a pinnacle and then slowly declined, each ward reaching its highest incidence in different weeks of the epidemic

By the end of the second week of July, ten city wards out of sixteen had been invaded by epidemic poliomyelitis

Cases from all sixteen wards were not reported until August 5, the fifth week of the epidemic

POSSIBLE FACTORS OF SPREAD

The first case of epidemic poliomyelitis was reported, July 3, 1916, in a nursing baby in the family of an express driver, whose business daily took him to Brooklyn and New York, where he delivered and collected express packages between the two cities There was no history of exposure to infection other than this, no member of the family had been out of Newark in many months

TABLE 3—PERCENTAGE DISTRIBUTION

Ages	Males		Females		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	12 9	17 1	14 0	13 5	13 4	15 7
1 year	23 7	22 5	22 4	30 5	28 2	25 6
2 years	21 4	25 2	21 9	18 4	21 6	22 6
3 years	17 4	13 5	14 5	10 6	16 2	12 4
4 years	10 0	8 6	8 7	9 9	9 5	9 1
Under 5 years	85.5	86 9	81 5	83 0	83.8	85 4
5 to 9 years	11 0	8 6	14 0	10 6	12 3	9 4
10 to 14 years	1 8	2 7	2 3	4 3	2 0	3 3
15 years and over	1 6	1 8	2 3	2 1	1 9	1 9
Total	100 0	100 0	100 0	100 0	100 0	100 0

In the total number of 1,360 cases during the three months of July, August and September, a direct history of exposure to a previous case was obtained in seventy-nine instances In none of these cases could any infection be traced to schools or to any one common point of origin

In sixty-six instances more than one case appeared in the family, and in two instances three cases arose in the same family When more than one case occurred in the same house, the interval between the times of onset was brief In twenty families the second case occurred the same day, in seven, within twenty-four hours, in nine, within forty-eight hours, in six, within three days, and in eight families, within four days In two families in which three cases were reported, the interval between the second and third cases was four and five days, respectively

The milk supply showed that 267 families used raw milk, 533, pasteurized milk, 442, condensed milk, and 148 families used no milk

No definite relationship could be established in the number of rooms occupied by families, and the cases of poliomyelitis developing in these families

In view of the fact that from 50 to 60 per cent of all the cases reported were treated in hospitals, there must have been occasions when infection might have been spread from sick children to the well in the hospital wards, and yet not a single instance of this nature was reported during the period of the epidemic

The history of the cases reported during the first week in July did not appear to suggest any definite common origin of infection Briefly, the occurrence of these cases was as follows

Case 1—In the Tenth Ward, in the family of an express driver to Brooklyn The baby was breast fed There was no history of exposure.

Case 2—In the Fourth Ward, eleven blocks from the first case. The physician and the milk and food supply were different. There was no history of exposure

Case 3—In the Tenth Ward, one and one-half blocks from the first case, in the family of a junk dealer There was no history of exposure.

Case 4—In the Tenth Ward, four and one-half blocks from the nearest case, in an Italian family The patient was a nursing baby There was no exposure

Case 5—In the Thirteenth Ward, 1¼ miles from the nearest case, in the family of an Italian, the driver of a milk wagon There was no exposure

TABLE 4—CASE FATALITY (DEATHS IN EVERY HUNDRED CASES)

Ages	Cases	Deaths	Percentage
Under 4 months	22	8	36.4
4 months to 1 year	160	49	30.6
Under 1 year	182	57	31.3
1 year	315	93	29.5
2 years	294	82	27.9
3 years	220	45	20.5
4 years	129	33	25.6
Under 5 years	1,140	310	27.2
5 to 9 years	167	34	20.4
10 to 14 years	27	12	44.4
15 years and over	26	7	26.9
Total all ages	1,360	363	26.7
Total males	788	222	28.2
Total females	572	141	24.7

Case 6—In the Tenth Ward in an Italian family The patient was a breast-fed baby, a cousin of the fourth patient. There was history of exposure

Case 7—In the Tenth Ward, four blocks from the nearest case, in an American family There was no exposure.

Case 8—In the Tenth Ward, half a block from the nearest case in a Polish family There was probable exposure.

Case 9—In the Tenth Ward two blocks from the nearest case There was no evidence of exposure

Case 10—In the Tenth Ward, six and one-half blocks from the nearest case, in an American family There was no exposure

Case 11—In the Tenth Ward, two blocks from the nearest case in an American family There was no exposure

Case 12.—In the Fourteenth Ward a mile from the nearest case in a Jewish family There was no exposure.

Case 13—In the Thirteenth Ward, in the family of a German a chauffeur for the City Hospital ambulance There was no exposure. The nearest case was at a distance of five blocks

Case 14—In the Tenth Ward, in an Italian family The father of the patient was a street cleaner There was no exposure. The nearest case was half a block away

DISTRIBUTION AND MORTALITY

Males appeared to be more susceptible than females to poliomyelitis, the number being 788 males and 572 females The type of disease in males would also appear to be severe, the case mortality for males being 28.3 per cent of recorded cases as compared with a case mortality of 24.7 per cent for females

Of all the patients, 83.8 per cent were under 5 years of age, and 85.4 per cent of the deaths were at this age Under the age of 5 years the greatest incidence was at the 1 year period, 23.2 per cent, as was also the percentage of mortality to all deaths, 25.6

The case mortality for all ages was 26.7 per cent, at 1 month of age the case mortality was 100 per cent

Under 1 year, 31.3 per cent of the cases were fatal, under 5 years, 27.2 per cent, and between 5 and 9 years, 20.4 per cent

Between 20 and 24 years the disease appeared to manifest unusual virulence, a case mortality of 57.1 per cent being recorded Similarly, between 10 and 14 years the fatality was 44.4 per cent All the monthly age periods under 1 year showed the fatality to be also unusually high

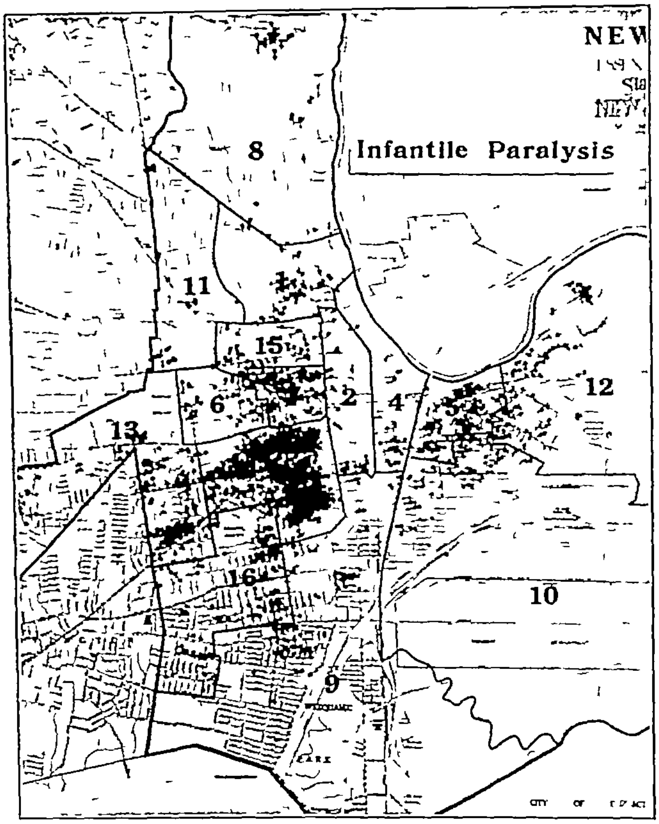


Fig 2—Complete cases, July August and September 1916

The incidence rate in Newark, 3.3 per thousand population, was considerably higher than in New York City, 1.8, and in Hoboken and Jersey City, each of which had a rate of about 1 per thousand population

CLINICAL TYPES AND DIAGNOSIS

Of the clinical types of poliomyelitis, so exhaustively described by Wickman, Frauenthal and others, the spinal predominated In this class of cases, few symptoms of gravity were present The onset was usually of such mildness that the lameness resulting from paralyzed muscles or groups of muscles was frequently the only complaint by children to parents or guardians

This frequently brought about stories of falls and minor accidents as the cause of the inability to use a limb The explanation by physicians of the true nature of the disease was frequently received with

dilatation with dark blood Pericardial and sometimes endocardial ecchymoses

Lesions Due to Bacterial Nature of Disease—Toxic—Heart Cloudy swelling Liver Cloudy swelling Kidneys Cloudy swelling to a toxic and degenerative tubular nephritis

Lesions Which Whould Suggest Portals of Entry of Germ—Intestines Small, pinkish hyperplasia of Peyer's patches and solitary follicle with pinkish hyperplasia of mesenteric glands Colon Follicular colitis with hyperplasia of solitary follicles Mucosa Nasal and tonsils in cases examined were quite free and clear, also throat mucosa

COINCIDENT PARALYSIS IN DOMESTIC ANIMALS

From the beginning, poliomyelitis was looked on as a contagious disease, much attention being paid to the paralysis occurring in domestic animals on the supposition that animals were responsible for the spread of the infection During July, August and September, 1916, cases of paralysis in animals were brought to the attention of the board of health

Considerable interest was aroused as to the possible relationship between such pathologic conditions among animals and the existence of poliomyelitis cases in children

Dr Harrison Martland investigated four of these paralysis cases and submitted the following conclusions as the result of his investigations on one horse, two dogs, and one cat

TABLE 5—WEEKLY WARD DISTRIBUTION OF POLIOMYELITIS CASES AND DEATHS

Date	Wards																Total Cases	Total Deaths	Case Mortality	Temperature Mean	Humidity Mean	Total Rainfall
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16						
July 8				1						9			2	1			13	2	15 4	78 6	64.1	0 16
July 15			5	1	6	2	2			17		4	3	9		7	56	18	32.1	74 6	68 6	0.89
July 22	1	2	11	4	15		3		2	9		7	4	3		8	64	24	37 5	75 0	77 6	0 44
July 29	1	15	32	2	25	1	5	2	2	14		8	11	12	3	8	141	36	25.5	75 3	76 4	2.37
August 5	4	3	46	6	27	5	11	2	18	12	4	33	15	17	4	31	233	72	30 9	77 1	56 7	Trace
August 12	6	11	51	5	12	12	25	2	13	16	4	18	19	37	4	24	259	67	25 9	76 0	60 0	0 24
August 19	17	6	36	2	6	9	16	2	22	4	6	20	31	26	6	21	230	44	19 1	71.6	58 0	0 47
August 26	3	2	9	3	6	8	11	4	16	4	2	10	25	30	10	7	150	42	28 0	77 0	54 6	Trace
September 2.	5	2	7	2	1	8	4	5	12	2	1	9	15	9	4	3	89	24	27 0	70 7	58.8	0 03
September 9	2	1	2		8	3	2	4	3	1	3	1	5	5	4	6	45	16	35 6	71 7	69 7	0.37
September 16	3	3	3	1	1	1	1	5	1		2	3	6	2	5	1	38	7	18 4	67 7	56 7	1 79
September 23	2		1			1		8	1		1	2	9	3	1	1	30	10	33 3	60.8	59 7	1 12
September 30	1			1				2	2				1	2	2	1	12	1	8 3	60 9	59 1	0.38
Total cases	45	45	203	28	102	50	80	36	87	88	23	115	146	156	43	113	1360	363	26 7			
Total deaths	18	11	49	5	31	15	24	11	21	33	3	28	36	42	14	22						
Case mortality	40 0	24 4	24.1	17.9	30 4	30 0	30 0	30 6	24 1	37 5	13 0	24.3	24 7	26 9	32 6	19.5						

Animal 1—Fox terrier dog had paralysis of the hind limbs extending to the fore legs, and died with convulsions Acute encephalitis was found The gray matter was pinkish There was active hyperemia of the cord, with a suggestion of punctate red spots near the anterior horns Microscopic examination of the brain and cord revealed suggestive round cell infiltration in the cord but no typical lesions of human poliomyelitis Examination of the lungs revealed bronchopneumonia. There was cloudy swelling in the heart muscles, kidneys and liver, and acute splenitis

Three fox terrier puppies inoculated in the subdural space with emulsion of this dog s brain and cord in 50 per cent glycerin gave negative results Several attempts were also made to inoculate dogs by an intracranial route with emulsion of brain and cord from human poliomyelitis patients but with negative results in all cases

Animal 2—Small fox terrier puppy had supposed well marked paralysis of the hind limbs Moderate encephalitis was found The cord showed a few red spots in the gray matter near the anterior horns Microscopic examination revealed an active hyperemia in the lower cord with diffuse lymphocytosis Later examination of the cord from normal dogs revealed a considerable number of small round cells, and as the lesion in this case was not at all perivascular it may be assumed that the numerous small round cells are not abnormal The main pathologic condition did not indicate poliomyelitis The cause of death appeared to be a distinct encephalitis with hemorrhage in and near the anterior horns of lower cord

Animal 3—Cat had respiratory difficulty, and paralysis of the hind limbs A diphtheritic membrane in the larynx was found, covering the vocal cords Smears revealed the presence of bacilli resembling the Klebs-Loeffler bacillus with cultures negative The brain and the cord were negative for poliomyelitis

Animal 4—Horse with symptoms of hindleg paralysis was shot Thrombosis of the mesenteric veins, and acute nephritis were found The brain and the cord were normal

COMMENT

There is a considerable and variable number of diseases in domestic animals presenting clinical symptoms of paralysis of sudden onset resembling human poliomyelitis Gross and microscopic anatomic examination have failed, however, to reveal any resemblance to the lesions found in human or experimental monkey paralysis

Paralytic diseases in the lower animals appear not to be at all uncommon, and their recorded prevalence during epidemic times is due to the increased attention paid to such conditions in man

There is no reason to suppose that the lower animals play any part in the spread of human poliomyelitis, and it is extremely doubtful if poliomyelitis exists among them

SUMMARY

There is every reason to suppose that the infection of poliomyelitis was carried from the original focus in Brooklyn to Newark in July, 1916

The first case occurring in the family of an express driver who went daily to Brooklyn suggests an adult means of infection

Proximity to New York and Brooklyn undoubtedly was the factor in the undue prevalence of poliomyelitis in Newark Direct exposure to previous patients was known in seventy-nine instances among 1 360 cases

No nationality or condition of social life was exempt from infection

Two cases in one family were reported sixty-six times

Infection by food was not suggested, nor could any sanitary condition other than that existing in congested areas be shown to have any bearing on disease incidence

No definite focus of disease was traced to schools

There was no case of contact infection in hospitals

The endemic type of poliomyelitis has a case mortality of 4 per cent, and an epidemic case mortality of 26 3 per cent

Seasonable prevalence is highest in August, associated with a high mean temperature and a low mean humidity and rainfall

Cases of poliomyelitis in Newark appear to have begun from multiple foci and not from a single focus of infection from which the whole community was attacked

Small areas of incidence indicate the spread of infection from one exceptionally virulent case

Of all those attacked, 83 8 per cent were under 5 years of age

Of all those who died, 85 4 per cent were under this age

Males were more susceptible to the disease than females

Spinal types of the disease predominated, and many mild cases were observed suggesting a much wider prevalence of these in epidemic times

Respiratory fatal cases may be mistaken for diphtheria or croup

At necropsy a characteristic color of the gray matter was observed ranging from pinkish gray to scarlet

No softening of cord as mentioned by other observers was encountered

The nervous system bears the brunt of the attack, death being due to respiratory paralysis in 99 per cent of all fatal cases,

Lesions in the intestine suggest a portal of entry of infecting organisms

The nasal and tonsillar mucosae were found normal

Paralyzed domestic animals found during the epidemic did not show at necropsy any pathologic lesions resembling human or monkey poliomyelitis

There is no reason to suppose that the lower animals play any part in the spread of poliomyelitis, and it is extremely doubtful if poliomyelitis exists among them

CONCLUSIONS

Epidemic poliomyelitis appears to be a disease carried directly from place to place by some human carrier not yet possible of identification

Infection by direct contact, although possible, is not probably the commonest way of infection

The predisposing causes of the disease seem to be age (under 5 years) and season (high temperature and low rainfall)

Studies —Histories make men wise, poets, witty, the mathematics, subtle, natural philosophy, deep, moral, grave, logic and rhetoric, able to contend —Bacon

---

THE ABSOLUTE DETERMINATION OF INTRACRANIAL PRESSURE

L H LANDON, MD
PITTSBURGH

It is more than thirty years since Corning performed the first lumbar puncture for therapeutic purposes This diagnostic aid has now become of almost routine frequency, and yet but little effort has been made, except by the experimentalist or the occasional specialist, to emphasize the importance and value of a real scientific estimation of cerebrospinal fluid pressure

To the thoughtful observer, the slipshod methods usually employed for this purpose are unsupportable The estimation of the pressure by the rapidity of flow from the lumbar puncture needle, the height to which the fluid may ascend in an attached tube, or other crude methods, is as justifiable as would be the introduction of a cannula into an artery or a vein to estimate the blood pressure from the distance of the spurt or its rise in a column Under constant pressure, the rapidity of flow from a lumbar puncture is dependent on many factors the caliber of the needle, the accuracy of its introduction, the possible partial occlusion of its tip by membranes or nerves, the position of the patient, and the individual judgment of the observer Hydrostatic pressure, however, if the patient remains in a constant position, will remain the same under all these circumstances The accurate estimation of this pressure is possible only with some form of manometer I am well aware that certain manometers have been proposed and used for this purpose, but they have been either of too delicate construction or too cumbersome for common use Furthermore, the lack of formulated and standardized rules for their employment has led to widely varying statements as to the normal pressure, and so much confusion has resulted that they have been practically discarded as useless The normal pressure has been stated by Adamkiewicz to be from 80 to 100 mm of water, by Key and Retzius, from 160 to 200 mm, by Quincke, from 40 to 60 mm, by Koenig, from 125 to 150 mm There is a variation in these statements of from 40 to 160 mm of water as a minimum to from 60 to 200 as a maximum It is inconceivable that, under normal conditions, such latitudes of pressure are possible, at least, they form no basis for comparison in judging abnormal conditions

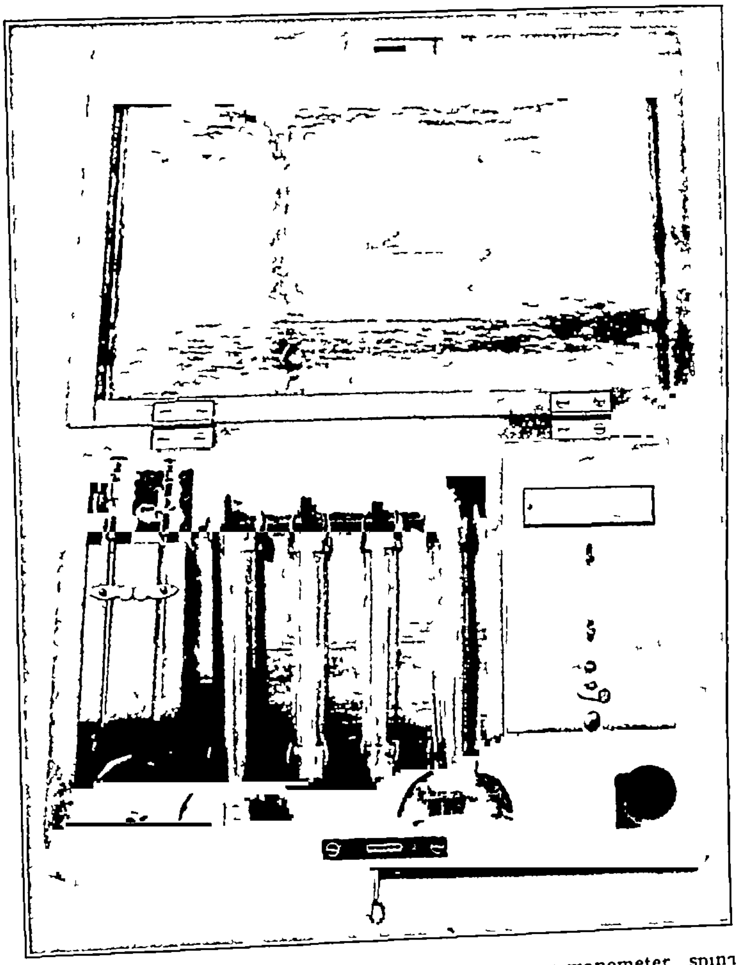


Fig 1 —Author's spinal pressure outfit, containing manometer, spinal needles, novocain solution, 5 per cent, glass graduates with weighted bases, and test tubes

To overcome these difficulties and to secure a reliable and simple instrument which could become of common and practical use, I devised and have used for the past two years the needle and manometer illustrated herewith It is hoped that this instrument, or one equally as good, may be accepted as standard, and that attention will be paid to the details of its use, to the end that the estimation of intracranial pressure may be rescued from the realm of guesswork to that of scientific certainty, and that from the accumulation of large numbers of individual observations we may be able to establish the normal and to interpret and utilize the findings of abnormal spinal pressure

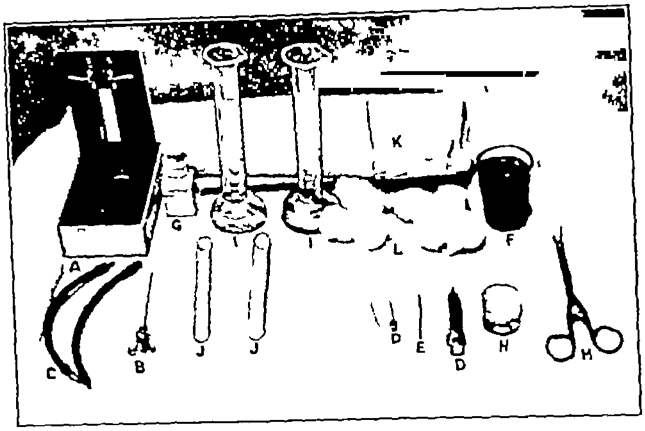


Fig 2—Properly equipped lumbar puncture tray *A*, manometer, *B* spinal needle *C*, connecting tube *D D* hypodermic syringe and needle *E*, Hagedorn needle *F* iodin 3 5 per cent. *G* novocain 0 5 per cent., *H* glass for novocain *I I* glass graduates with weighted base *J*, *J* test tubes, *K* sterile covers, *L*, small sponges, *M* sponge forceps.

The instrument consists of a small mercury manometer with a corrected scale, graduated in millimeters up to 70, attached between the arms The scale can be adjusted so that the zero mark can be placed at the mercury level At the top of each arm is a cut-off valve to prevent loss of mercury when the manometer is not in use The openings for attachment to the needle are ground to standard record gage to admit a tip on the rubber tube connecting the needle and monometer This permits of quick and easy connection

The special needle of No 12 wire gage is constructed of iridioplatinum This metal will bend or kink, but is not easily broken The shank or outer end of the needle has a Y outlet with a two-way cut-off cock valve This permits of opening either outlet while the other is closed or both may be closed at the same time so that no fluid can escape until the first reading is made The tips of these outlets are of record pattern The tube leading to the manometer is attached to the straight outlet, through the lateral outlet, the fluid when desired, is permitted to flow from the needle The manometer and needle, and the connecting attachment, together with a 1 c c record syringe and needle for local anesthesia, are contained in a small metal case of pocket size For private use, outside the hospital, I have found useful the proper graduates and test tubes for collecting and carrying the fluid and a small bottle and glass for the local anesthetic which renders lumbar puncture painless These additions together with the manometer, are carried in a small wooden cabinet with compartments for each Provision is also made for carrying two extra needles, one of short length for use in infants With this outfit, one has all the essentials for properly performing a lumbar puncture

Certain standard conditions have been found essential if uniform and comparable pressures are to be secured The patient should always be in the lying position with the cerebrospinal axis as nearly as possible in a position horizontal with the table or bed Any deviation from this position, even the raising or lowering of the head, will modify the reading The truth of this is best illustrated by the accompanying illustration In Figure 4 the patient is in the proper position and the pressure is seen to be 8 mm Without removing the needle, the patient was placed in the sitting posture, in which (Fig 5) it will be seen that the pressure recorded has risen to 35 mm Both of these readings are normal, one for the horizontal, the other for the vertical position, the increase in the latter being due to the change incident to raising a column of fluid the height of the cerebrospinal axis above the level of puncture It is impossible and unnecessary to place all patients in the sitting posture whose spinal pressures we wish to take, therefore, in order to standardize readings, the first position is indicated

The patient is placed on the left side, with the spine well arched by flexing the neck and thighs Puncture is made in the midline between the fourth and fifth lumbar vertebrae after anesthetizing the skin and subcutaneous tissues at the point of puncture by the injection of 0 5 per cent novocain solution The entry of the needle through the skin is greatly facilitated by making this initial puncture with a Hagedorn needle, or any cutting edge needle, as the bevel on the lumbar needle is short and the material rather soft, it is often a little difficult to introduce through the skin without this preliminary preparation, it is also less painful As soon as it is felt that the dural sac is punctured, the stylet is withdrawn, and at the appearance of the first drop of fluid, the shut-off cock is turned to the left, thus shutting both outlets until proper connections are made The rubber tubing connecting the straight outlet and the right hand arm of the manometer is attached and all valves opened The mercury will immediately rise in the left hand arm, and the height is noted on the scale The lateral outlet of the needle may now be opened, which at the same time cuts off the straight outlet and permits the fluid to escape Withdrawal of fluid is thus at all times under full control, guided by the effect on the pressure

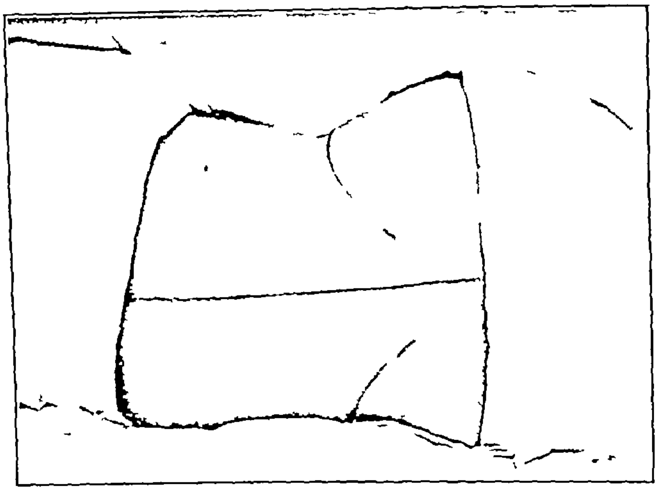


Fig 3—Patient in proper position for lumbar puncture. Note horizontal plane of spinal axis

Puncture may be done and pressure taken as safely in cases of posterior fossa lesions as in those of pretentorial situation, since actual withdrawal of fluid is not necessary in order to estimate the pressure

Not only do the needle and manometer permit of perfect control over the withdrawal of fluid, but also they are of distinct advantage in the intraspinal administration of serum or other therapeutic agents Through the lateral outlet the serum may be injected by either the syringe or the gravity method, repeated readings during its introduction controlling both the rate of flow and amount injected

Fig 4—Manometer attached, showing normal pressure with patient in proper position

Oscillations of the mercury column occur synchronously with the pulse and respiration, respectively, but are slight and of no moment Calmness and quiet on the part of the patient are, however, essential, as struggling, straining or resistance will greatly raise the pressure temporarily and negative the findings during their occurrence

From a large number of observations, we have found that normal intracranial pressure varies from 6 to 10 mm of mercury, with an average nearer 8 mm Readings even slightly above 12 mm under proper attention to details of the technic are regarded as suspicious Abnormal pressure varies from only slight rises to enormous tension, the highest probably occurring in the acute meningitides, in which the patients perish as often from the intracranial tension as from the acute toxemia In cases of tuberculous meningitis, for instance, I have observed the mercury shooting completely out of the open arm of the manometer, indicative of the tremendous influence of the tension in this disease

The various conditions which may be responsible for increased intracranial tension are so numerous that they cannot be considered in this communication However, I have never seen an increased pressure revealed in a purely functional condition, while in organic lesions this complication is nearly always present at some stage In the latter instances, spinal pressure is very often a valuable guide in their treatment There are reasons for believing that in many cases of traumatic, and in some instances of so-called idiopathic epilepsy, there is constantly, or at least prior to the attacks, an increase in intracranial tension If the presence or absence of this factor can be established, we have some guide as to the advisability of operative interference in certain of these cases The value of the study of spinal pressure under these circumstances has been clearly demonstrated to me in two cases coming under notice within the past few weeks

Again, we find ourselves more and more often guided by manometric readings in the treatment of cranial traumatism, both recent and in those often vague but distressing consecutive or remote conditions, the late results of cerebral injury The value of spinal pressure estimation in suspected intracranial tumors is of inestimable value, variation in tension occurring long before the intra-ocular symptoms become manifest If we would but avail ourselves of such a diagnostic aid, often the distressing results of prolonged intracranial tension would be avoided by the early institution of proper operative interference These facts are well recognized by those engaged in neurologic surgery but are wofully neglected by the vast majority who negligently permit the poor victims of these conditions, subjected to various procrastinating treatments, to go from bad to worse until, as a last resort, they are foisted on the surgeon in a vain endeavor to restore a hopelessly lost vision, to relieve the unbearable headaches, and to prolong a miserable and unwelcome existence

We should not lose sight of the vast field for clinical investigation into the cerebral disturbance occurring in the course of constitutional disease, such as the delirium of the infectious fevers, the "meningismus" of the Germans, in which there is reason to believe that in conjunction with the presence of irritant toxins in the cerebrospinal fluid, there is also an increase in secretion and consequent hypertension of the fluid The same conditions obtain in alcoholic delirium, in the cerebral disturbances in puerperal eclampsia, and in carbon monoxid poisoning An almost untouched field lies open for determination of the part played by the cerebrospinal fluid in these complications, as well as to the best methods to pursue in their alleviation

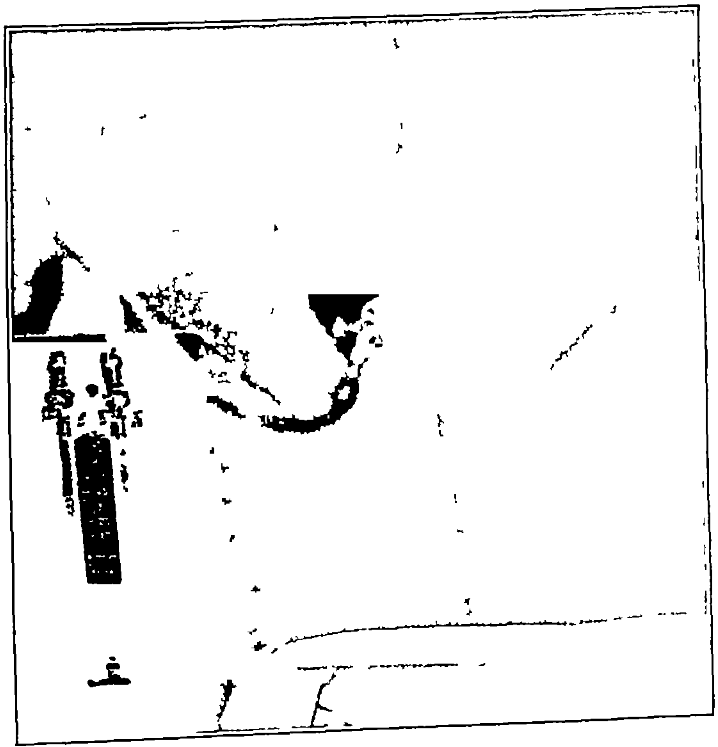


Fig 5—Same patient as in Figure 4, improper position Note change in mercury level

931 Carnegie Building

OPERATIVE CURE OF CONGENITAL PYLORIC STENOSIS

THYMIC DEATH AFTER SEVEN MONTHS, NECROPSY

J LOUIS RANSOHOFF, M D
Fellow of the American College of Surgeons
AND
PAUL G WOOLLEY, M D
CINCINNATI

The efficiency of the Rammstedt partial pyloroplasty in the treatment of congenital pyloric stenosis has been firmly established by many clinical observations, particularly those of Downes

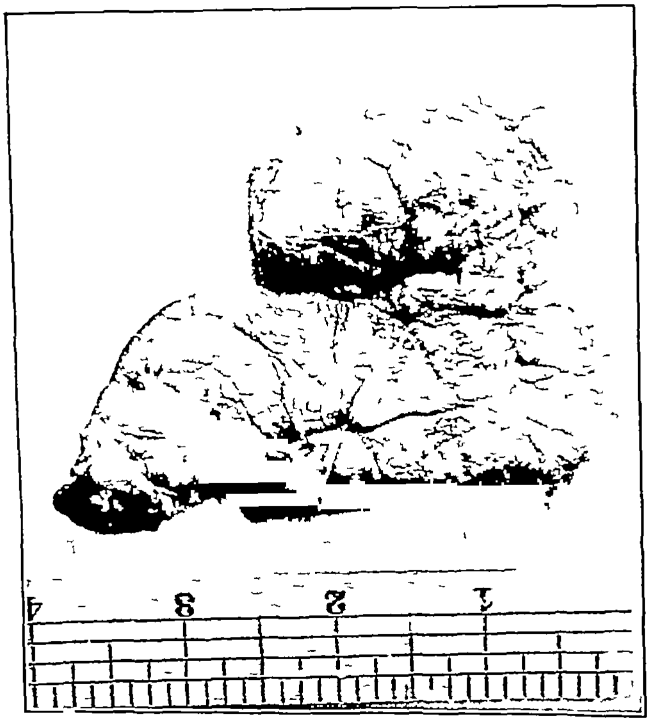


Fig 1—Thymus.

Its superiority to gastro-enterostomy is undoubted It can be done in far less time, with less shock and through a smaller incision As the gastro-intestinal canal is not opened, the danger of infection is minimized Perhaps its greatest advantage is the restoration of the continuity of the gastro-intestinal canal Since vomiting is not so frequent as after gastro-enterostomy, the vital problem of the feeding is simplified

The anatomic confirmation of the value of this operation is shown in the case reported herewith, which so far as we can learn is the only one which has been reported after a complete cure

History—An infant aged 10 weeks seen with Dr Max Dreyfoos, had had continuous and intractable vomiting since the third week of life. The child was exceedingly debilitated and thin, weighing less than at birth A pyloric tumor could easily be felt. Gastric peristalsis was evident. Through an incision to the right of the middle line the pylorus was exposed It was found occupied by a tumor of cartilaginous hardness 2 cm long and 1 cm. thick. A typical Rammstedt operation was done. The child's recovery was rapid and uneventful Feeding was at once begun, and the child gained 14 ounces the first four days after operation. At the age of 6 months the child was in every way normal, except that it was slightly overweight In the middle of the seventh month, the child, without warning, was found dead in bed

Necropsy—The body was that of a normal well developed and nourished child There had been some hemorrhage from the mouth The cause of death undoubtedly lay in an unusually large thymus (65 5 gm, Fig 1), for there was nothing else found in the body which could by any stretch of the imagination be chosen as even a remote cause There was a considerable congestion of the viscera, which could be due to thymus pressure The lymphatic glands were not as generally hyperplastic as one would expect in an outspoken status lymphaticus, the gastro-intestinal, urogenital and respiratory tracts were, except for the congestion, healthy

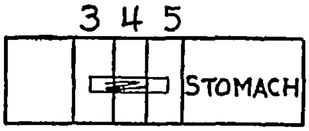


Fig 2—Key to location of sections given in Figures 3 4 and 5

One might be asked whether the death was due to the mechanical effects induced by the thymus or to some chemical factor contributed by the gland In the present state of our knowledge we must give it as our opinion that death resulted from the mechanical effects[1]

The stomach was normal and contained no blood, and the pylorus was patent The pyloric portion of the stomach, the pyloric ring and the first part of the duodenum were removed for study

Along the anterior surface of the pylorus there was a shallow linear depression approximately 2 cm long, which represented the scarred site of a previous surgical incision, and on this groove and its margins were tags of old fibrous adhesions, rather tenuous in texture, which had united the pylorus to the adjacent tissues From this specimen three smaller ones were made so that about half the groove was represented in the middle portion and a quarter in each of the others From each of these portions sections were made, and stained with hematoxylin and eosin (Fig 2) The numbers of the photographs indicate the location of the section in the sketch)

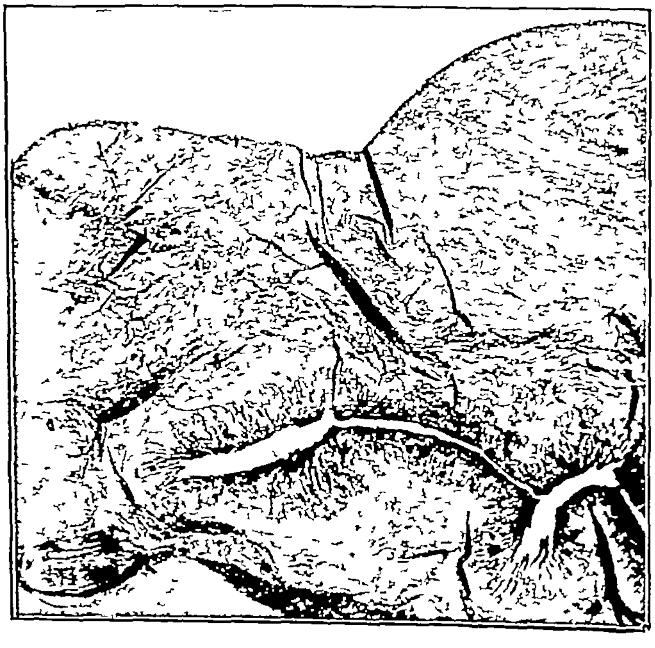


Fig 3—Section location of which is shown in Figure 2

The sections all showed practically the same state of affairs, namely that from the bottom of the groove to the submucosa there was a band of fibrous tissue which represented a loss of muscular tissue in that region The appearances may be compared with those which would be seen in case a ring shaped muscle were supplied at one point with a tendon

---

[1] Compare Park Jour Exper Med., 1917 25, 129 Rev Jour Lab and Clin. Med. 1917, 2, 361

Aside from this, the other parts of the tissue seemed healthy There was no bulging toward the exterior of the mucosa no evidence of diverticulum formation or hernia, and everywhere the other layers of the organ seemed healthy It is possible that the muscular layers were somewhat better developed than would be called normal, but the variation seemed too slight for weight to be attached to it.

It appears that the surgical incision permitted the muscular coats of the tissue to retract and the opening to gape, and that subsequently the space was filled with organized tissue, which, in its fully developed state, was fibrous tissue This has formed a typical linear contracted scar It seems that during the healing of the wound the pyloric orifice became dilated and then remained so, and thereafter performed its function in an acceptable manner

This is an anatomic proof of the perfect efficiency of this operation It shows also the futility of the numerous modifications, which only complicate the operation without in the least improving it Another interesting feature is the disappearance of the tumor mass, which was plainly shown at the operation

An important point is the association of enlarged thymus with congenital pyloric stenosis This was present in lesser degree in another of our cases, which promptly yielded to Roentgen therapy Palmer has shown the frequency of the simultaneous occurrence of the two conditions

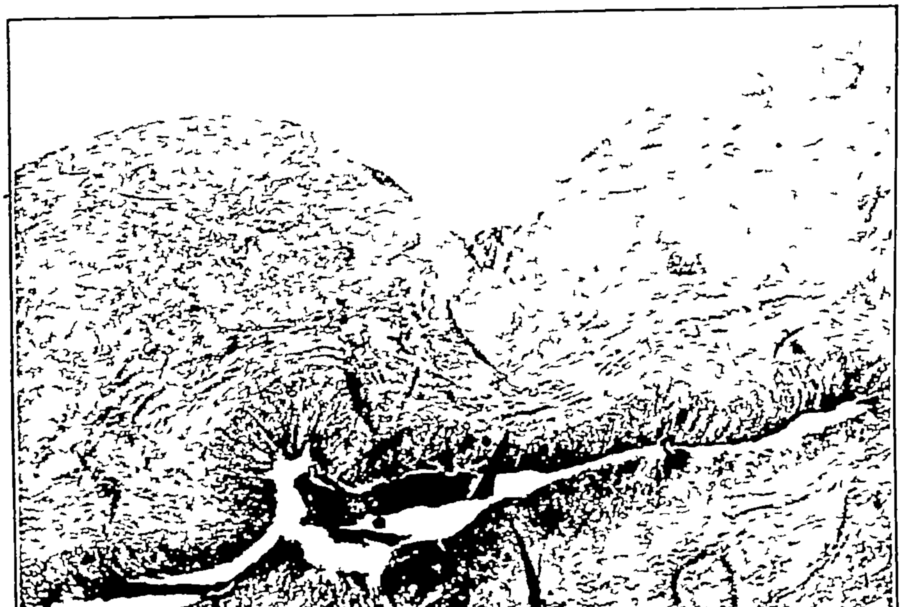


Fig 4—Section, location of which is shown in Figure 2

The prevalence of enlarged thymus has been greatly underrated In a recent communication before the Cincinnati Academy of Medicine, at Cincinnati, J E Benjamin reported nineteen cases occurring in 220 consecutive patients of the pediatric clinic The diagnosis was in each case confirmed by the Roentgen ray

This frequency of enlarged thymus probably best explains its not uncommon association with pyloric stenosis However the case may be, it is not unwise to be on the lookout for enlarged thymus, which once discovered is so readily cured by the Roentgen ray

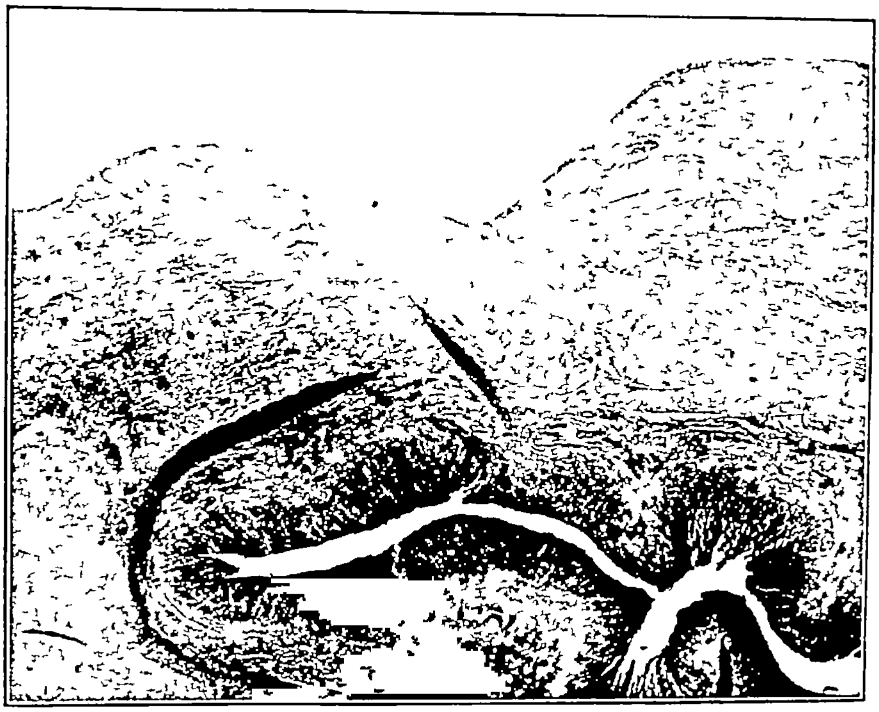


Fig 5—Section, location of which is shown in Figure 2

Railway Accidents—*Accident-Bulletin 58*, covering October, November and December, 1915, and *Bulletin 59*, covering January, February and March, 1916, contain data relative to accidents on steam and electric railways for the respective periods as reported by steam and electric railway companies to the Interstate Commerce Commission under the accident report law of May 6, 1910 For the last quarter of 1915 the number of killed in train accidents on the steam railways of the United States was 134 and the number injured 2,107 The total number of persons killed in all classes of accidents was 2,391, and the number of persons injured, 44,605 This includes 2,166 persons killed and 13,846 injured as the result of train service accidents to railway employees while at work, passengers getting on and off cars, by persons at highway crossings, persons doing business at stations etc, as well as by trespassers and others It also includes ninety-one persons killed and 28,652 persons injured in casualties reported as "nontrain accidents" On the electric railways during the same period one person was killed and 165 injured, including employees and all other persons in all forms of accidents During the first quarter of 1916 the number of persons killed in steam train accidents was 188 and the number injured 2,100 The total number of persons killed on steam railways was 2,138 and the number of injured 46,048 This includes 1,808 persons killed and 14,122 injured in train service accidents by employees while at work, by passengers getting on and off cars, persons at highway crossings, persons doing business at stations etc, trespassers and others It includes also 142 persons killed and 29 826 injured in casualties reported as 'nontrain accidents" On the electric railways during the same period seven persons were killed and 249 injured

ACCIDENTAL SURGICAL INJURIES TO THE BILE DUCTS

WITH REPORT OF A CASE

AXEL WERELIUS, M D
CHICAGO

In spite of the meager reports of operative injuries to the bile tracts, no doubt such surgical accidents are not as rare as the paucity of the literature on the subject would indicate The majority of such injuries occurred in the hands of able surgeons, some happened to masters in this particular field Thus it is safe to assume that in the experience of men of lesser eminence such calamities are not so extremely rare

Jacobson[1] has collected reports of thirty-four cases, to these may be added two by Moynihan[2] and the case reported below

The case which I report is the only one of its kind in the literature, and is unique from the type of injury inflicted, namely, complete severance of the common duct with proximal and distal ends securely tied, thus completely shutting off the bile flow from the liver to the duodenum It is the third case in which there was a secondary operation for repair of the common duct

The liability of the ducts to injury may be explained by the rather frequent anomalies of the course of these channels due to pathologic conditions

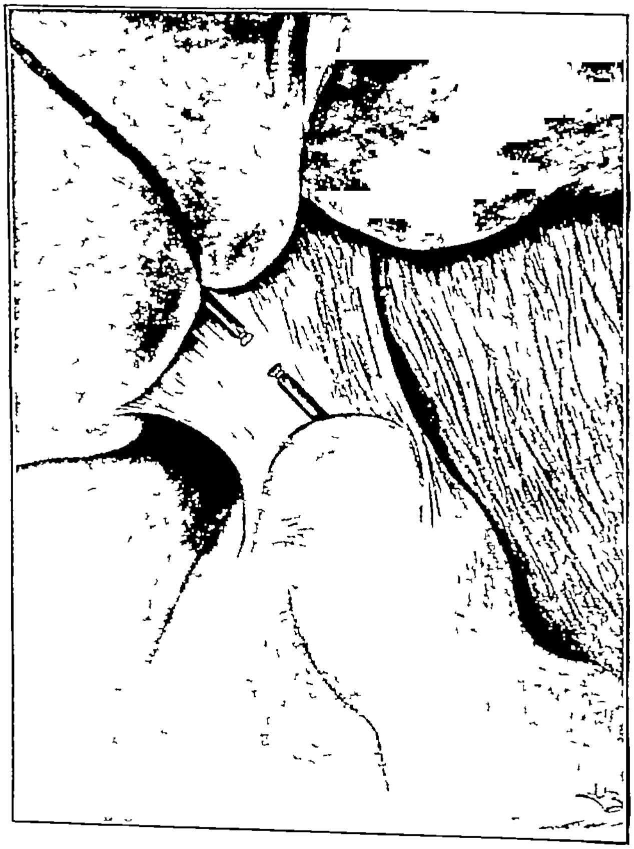


Fig 1—Accidentally resected duct with both ends tied.

The topography of the ducts has been studied by several investigators, but especially good work was done by Bruge[3] Shackner[4] and Brewer[5]

Bruge found in a series of forty-three specimens that in the majority of the subjects the cystic duct in its terminal part ran parallel to the hepatic duct, and in only a few cases united with the latter at the classical acute angle In a few instances, the cystic duct approached the hepatic at an acute angle and then ran parallel to it In some cases, the two ducts ran parallel to each other for the greater part of the course, closely bound together with connective tissue In a number of cases, the cystic duct partly or completely encircled the hepatic duct in a spiral manner, the spiral always running toward the right In this connection, it might be of interest to mention that in the preceding cases it would be impossible to tell in which duct a stone might be located Also, a stone in the cystic duct might, by pressure on the hepatic, give all the ordinary symptoms of common duct obstruction Thus it is seen that with such abnormalities, and especially with added pathologic conditions, the ducts might easily be injured during operations in this field However, if Judd's[6] method of identifying and tying separately the cystic artery and the cystic duct is employed, there should be no danger of injury to the common duct According to W J Mayo, this procedure can be used in the majority of cases

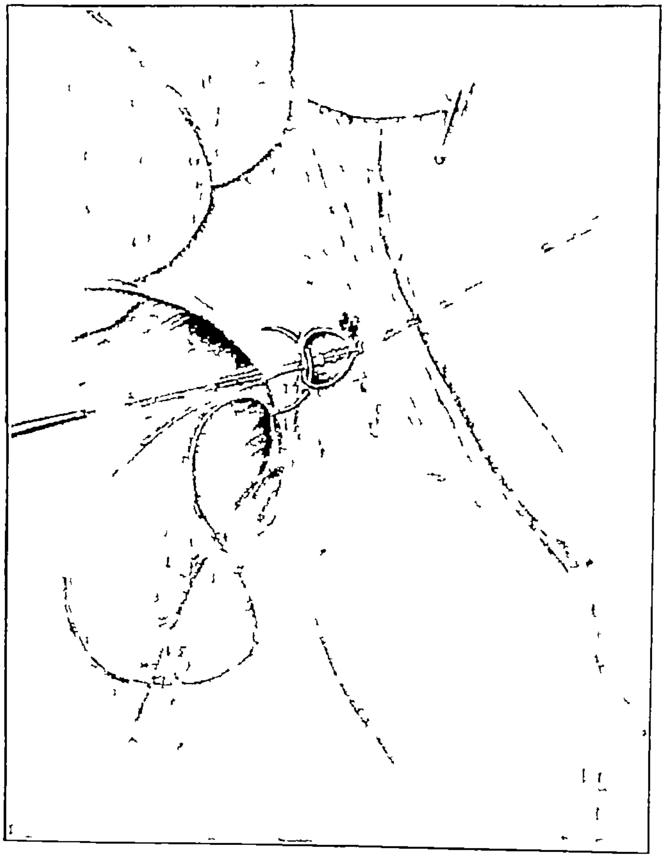


Fig 2—Method of anastomosis

REPORT OF CASE

History—A woman housewife, aged 47, had been operated on a week before I saw her, May 15-16, by a physician who had performed a cholecystectomy for gallstones Subsequent to the operation the patient had rapidly developed all the symptoms characteristic of common duct obstruction The physician expressed fears that he had accidentally tied off the common duct The history otherwise was negative means of the mouth gag (Fig 1, 8) The entrance of air through the nose and the mouth is completely excluded with cotton and a bandage, or a close fitting mask The metal tip (Fig 2, D, 1) of the tube is then connected with the apparatus, and the necessary admixture of ether and air regulated by means of the valves (Fig 2, B, ether valve, 5, air valve, 6) The opening (Fig 1, 2) in the top of the ether can is uncovered In case of respiratory failure, both the ether and the air valves are closed, the valve situated in front of the interrupter (Fig 2, 1) of the resuscitating device is opened, and artificial respiration produced by pressing the lever of the interrupter forward for inspiration, and backward for expiration through the opening (Fig 2, A, 2) Either a foot bellows or the piping of the laboratory may be used for compressed air When intrathoracic pressure with anesthetization is required, a two-mouthed glass bottle (Fig 3, 3) is substituted for the ether can The outlet valve of the regulator (Fig 2, B, 2) is removed by unscrewing the cap The tube for the air current (Fig 3, 1) is applied at this point The tube for the ether current (Fig 3, 2) is attached The interrupter for resuscitation is in the air current tube A safety valve (Fig 3, 5) for regulating the degree of intrathoracic pressure is introduced, as shown in Figure 3 The ether valve and the air valve of the regulator are adjusted for the required admixture of ether and air An intrabuccal tube (Fig 1, 7) may also be used for anesthesia

---

[1] Jacobson J H Am Jour Obst. 1914 **70** 6
[2] Moynihan Abdominal Surgery p 210
[3] Bruge E. Verhandl d deutsch. Gesellsch f Chir 1908 **37,** 238 268
[4] Schackner Ann Surg October 1910 p 419
[5] Brewer Ann Surg **29**
[6] Judd E S Ann Surg 1915 **61,** 306

Experience has proved that this apparatus and method are convenient, effective and reasonably economical

---

SPOROTRICHOSIS REPORT OF A CASE

A A Spoor, M D, Lansing, Mich
Bacteriologist, State Board of Health

This is the first case of sporotrichosis reported from Michigan R L Sutton says

> There are many busy practitioners who have never even heard of sporotrichosis For this reason, I believe that all recognized cases of the affection should be reported, during the next few years at least, in order to disseminate as widely as possible a knowledge of its symptomatology

Therefore I wish to report a case which came under my observation

March 11, 1917, Dr M R Morden of Adrian, Mich, wrote me to this effect

> Enclosed find discharge from a small, deep furuncle over enlarged cervical glands The patient, J W P, is an athletic young man, aged 18 Crop after crop of small boils on an area the size of his hand have been occurring in the spot mentioned for a few months, some of them like boils, others like scrofuloderma—tuberculosis cutis The hard swelling existed some months before the eruption over it occurred Please report findings

The small, subcutaneous boils, together with the enlargement of the neighboring lymph glands, and the duration of the disease, showing a lack of response to ordinary surgical treatment, led me to think of sporotrichosis I inoculated slanted glucose agar tubes with some of the discharge, and in three days at room temperature the sporothrix developed as white colonies and later became markedly pigmented with black pigment, forming large, flat, black colonies with marked striations The growth is not nearly so rapid as that of the *Aspergillus niger,* and the mycelial filaments do not grow up from the media (aerial) like the *Aspergillus niger*

Schenck in 1898 first described this parasitic mold, which he found in the lesions of a peculiar disease, beginning as a localized ulcer, with later involvement of the neighboring lymph glands, in which cold abscesses formed and opened to the exterior A second similar case was described by Hektoen and Perkins Since its discovery, a large number of cases have been identified in all parts of the world, and especially in the middle western portions of the United States The lesions in this condition resemble, at times, those of tuberculosis, while, occasionally, they appear more like those of syphilis The chief characteristics are the sharply defined, painless cutaneous or subcutaneous abscesses, which are small and which follow the course of the lymphatics, together with enlargement of the neighboring lymph glands, and they do not yield to the ordinary surgical prodecures Many of the cases occur on the extremities

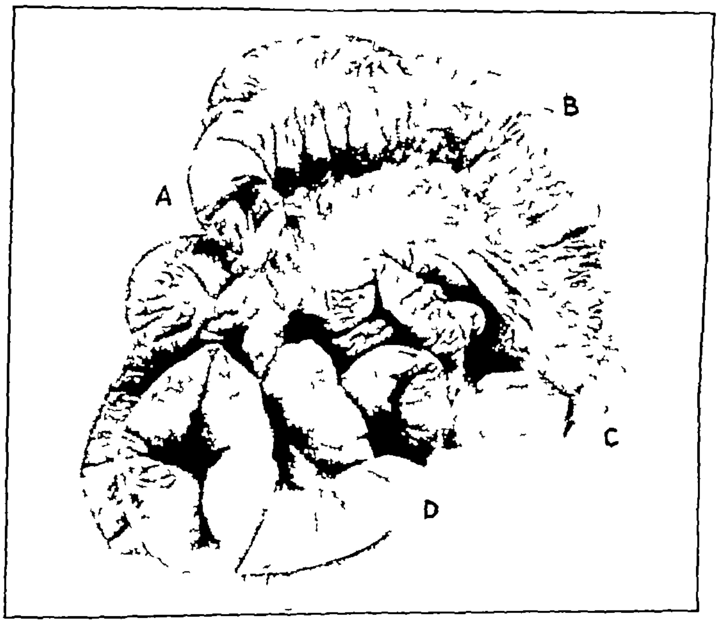
---

AN UNUSUAL CASE OF INTESTINAL INTUSSUSCEPTION

F A Van Buren, M D, Omaha

An infant, aged 5 months, admitted to the hospital, Dec 2, 1915, at 4 30 a m, five days after the onset of illness, had been well up to this time The child was bottle fed, and the modified cow's milk had apparently agreed with the child up to just prior to the illness, when the stools contained considerable curds The onset was sudden The child became restless from evident intestinal disturbance The bowels moved some the first day, the last movements containing blood and mucus On the second day, calomel was given, and 2-dram doses of castor oil every two hours for several doses The child began to vomit, but no more bowel movements resulted The child became rapidly worse, when on the fifth day it was brought to the hospital in a dying condition

The child was well developed, of apparently normal weight, unconscious and restless Respiration was of the Cheyne-Stokes type, the pulse could not be counted The abdomen was distended A tumor could be felt in the abdomen extending transversely between the iliac spines Pressure on this tumor produced a friction rub The tumor was palpable through the abdominal wall Owing to the seriousness of the infant's condition, no operation was performed, and it died after about three hours



Condition as found postmortem *A,* intussusception of ileum into cecum, *B,* transverse colon, *C,* descending colon, *D,* ileum

There were no special features in the history, symptoms or course of the illness, differing from the classical picture of intussusception of the bowel in infants

The postmorten examination of the abdominal contents confirmed the diagnosis, but we were surprised to find a double intussusception, of the ileum into the cecum for a distance of about 10 cm, and of the distended descending colon over the collapsed sigmoid for about the same distance The peritoneum was dry and had lost its luster The ileum was dark and congested, and contained much gas and fluids The neck of the ileocecal portion was tight, and grasped the intussusceptum so firmly that reduction was impossible without cutting It was covered by a plastic exudate The portion of colon between the proximal and distal obstruction was rather normal in appearance except for the lusterless appearance of the peritoneum The intestine was much distended with gas and fluids The distal intussusception was also covered at the neck by plastic exudate The distal colon and sigmoid were collapsed In order to preserve the specimen without mutilation, the intussuscipiens was not opened to examine the intussusceptum No doubt this was gangrenous, as is common Some speculation was indulged in as to which was the probable primary intussusception We decided the ileocecal was the primary one and that the purgatives had produced the second

SOME INSECTS AND REPTILES ON THE BORDER

James Coughlan, M.D., New York
Lieutenant, Medical Corps, Second New York Field Artillery, National Guard

When the national guard of the northern states reached the Mexican border on and about the first part of July, the natural and climatic conditions encountered were entirely new and unusual to men unaccustomed to that type of outdoor life. In the section called the "Magic Valley," embracing the towns of McAllen, Mission City and Pharr, where the New York guard was stationed, the country is arid and one of the most barren regions of the south. Cactus, mesquite and sage, with Spanish bayonets and daggers scattered here and there, comprised the only growth that flourished. Vegetation and grass were so sparse, more especially in the dry weather, that animals required an extensive area for grazing. One of the interesting features was the variety of insects and reptiles injurious or poisonous to man. During the earlier days, there were many tales told of the "deadly" rattlesnakes, centipedes, tarantulas, spiders and others that had never been heard of before and never will again. In the course of a six months' stay in that region a small amount of practical and personal knowledge of the subject was gleaned.

Most bites and wounds were received during the earlier months of July and August, owing possibly to the site of encampment on ground that was infested with insects, the fact that those months were very hot and animals seemed to be more predatory, and because of the limited protection at that time. The number of bites received depended more on the location than on the mobility of the unit. If a camp was made in the midst of a cactus-mesquite-sage field the bites were more numerous than on a plain. More men suffered from insect wounds and snake bites for a given period of time at our base camp on the outskirts of McAllen, than for the same period of time on the plains of Palo Alto.

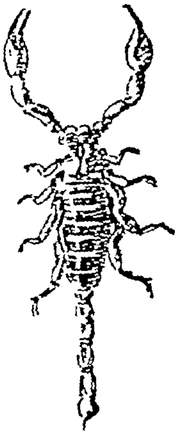


Fig. 1.—Scorpion.

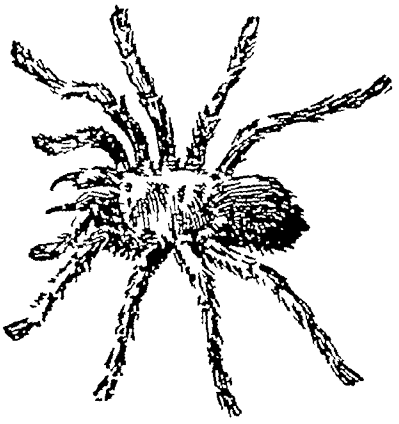


Fig. 2.—Tarantula.

Red ant bites were numerous, and when a person was bitten in a number of different places an annoying irritation and smarting sensation was produced. Tincture of iodin painted over the area relieved the condition in a few minutes.

Scorpions (*Scorpionidea*) of the *Arachnida* group caused many troublesome bites. Scorpions vary in length from 1 to 4 inches and are composed of a cephalothorax united to the abdomen by a broad base, the body elongated and plainly segmented and narrowing to a tail containing a vesicle with a sting. Two palpi emerge from the cephalothorax, one on each side, and end in two pairs of claws. They have about eight eyes and the same number of legs. A small white area resulted from the bite which required, as a rule, several applications of tincture of iodin.

Of the many varieties of spider bites the most severe was that caused by the tarantula (*Theraphosidae*) of the *Arachnida* group. These vary in length from 1 to 5 inches, with the body and legs covered with long black hair, and are slow in moving but quick to strike. They produced white raised swollen areas about an inch in diameter with a smarting stinging sensation. The earlier bites were treated with iodin, but later more instant relief was obtained from the use of equal parts of spirit of ammonia and water applied as a wet dressing. No constitutional effects were seen.

Centipedes (*Chilopoda*), of the group *Myriapoda*, were not so numerous. The largest, seen in the possession of a Texan, was 6 inches long. Each of its many segments has a pair of legs, and the poison comes from a large pair of jaws under the head, which is developed from the second pair of legs. Two bites were seen and quickly incised and drained, and a wet mercuric chlorid dressing applied. No constitutional symptoms resulted.

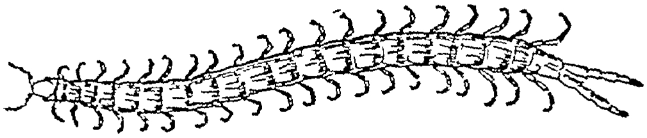


Fig. 3.—Centipede.

The Texas rattlesnake (*Crotalus atrox*) and the diamond rattlesnake (*Crotalus adamanteus*) are so similar that the term "Diamond-backed" is commonly applied to rattlesnakes in Texas. It seems to be questionable whether or not they belong to separate classes, though the shapes of their heads differ and the Texas rattlesnake is not so good a swimmer as the diamond rattlesnake. The latter lives in the southeastern part of this country from Florida north to the Carolinas and west to the Mississippi Valley. The Texas rattlesnake occurs in the arid portion of Texas, parts of southern New Mexico, Arizona and northern Mexico. They are frequently seen in cactus fields, the largest was 7½ feet in length with fourteen rattles, and its skin is now in the possession of Capt. Louis Kuntz of the Second New York Field Artillery. The rattles end in a cone-shaped cup or button. The snake's projectile range is about one third of its length, and its striking range about one half its length, accompanied by a forward thrust of the head and neck. It is possessed of movable fangs at the anterior end of the upper jaw which are erected coincidentally with the forward thrust. Pressure by the muscular apparatus of the jaw causes an expulsion of venom from the poison sac along the unsheathed fangs and into the wounds. As the fang points frequently diverge, it is a combination bite and blow, the wounds usually being larger than similar incisions from curved needles. The wounds are about five-eighths inch apart and from one-half to three-quarters inch in depth, accompanied by a small amount of bleeding.

Six cases of rattlesnake bites came to my attention, varying in severity, the most severe occurring in a "guard" who had captured the snake with a forked stick, and insisted on picking it up with his bare fingers. He received a bite on the middle finger of the left hand, the fangs penetrating to the bone, and was seen about five minutes after the occurrence. The finger was swollen, the fang marks plainly visible, with a little dark red blood oozing from the two openings. A tourniquet was applied over the upper arm and two incisions about 1½ inches long made over each fang point, which allowed about 2 ounces of dark red blood to flow. Five per cent tincture of iodin was painted in the wounds and the fingers, forearm and arm bandaged with a mercuric chlorid wet dressing. The tourniquet was loosened and tightened every twenty minutes for two hours. The entire arm up to the tourniquet became swollen about one and a half times its normal size with a bluish-red discoloration, somewhat painful and causing considerable anxiety to the patient, but no

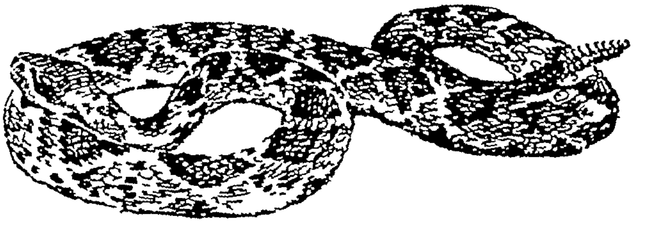


Fig. 4.—Texas rattlesnake.

constitutional symptoms Repeated mercuric chlorid applications were made, and strychnin sulphate, one-thirtieth grain, given by mouth and repeated in half an hour Aside from slight stiffness in the bitten finger, the patient made an uninterrupted recovery

In five other cases, from five to twenty minutes elapsed between the time of the rattlesnake bites and the time they were treated, and all the patients recovered without any serious manifestations

719 West One Hundred and Eightieth Street.

Therapeutics

DISTURBANCES OF THE KIDNEYS

(Continued from page 1478)

HYDRONEPHROSIS

This condition — a dilatation of the renal pelvis — can occur only as the result of some obstruction in the ureter Such an obstruction may be due to an impacted calculus, a coagulum of blood, congealed pus, some tumor growth pressing on the ureter, a twist of the ureter caused by looseness of the kidney, or to long continued distention of the bladder An obstructed ureter will rarely be found as a congenital condition The longer such a dilatation of the pelvis of the kidney continues, or the more frequently such a condition occurs, the greater the injury to the kidney structure Frequently, if the pressure of urine in the kidney becomes sufficiently great, it will either straighten a twisted ureter or dilate the ureter around an obstruction, and the kidney will empty itself into the bladder If the calculus or other obstructive substance plugs the orifice of the ureter and is soon displaced, dilatation of the pelvis may not occur and such plugging may not recur although the calculus may still remain in the pelvis of the kidney Any sudden obstruction or a twist of the ureter does not always lead to dilatation of the kidney pelvis, as the associated kidney congestion and a diminution of the excretion of urine sometimes prevents this Repeated obstruction, however, will generally cause a hydronephrosis

Anything that causes prolonged distention of the bladder, whether due to an enlarged prostate or to some urethral obstruction, may cause a hydronephrosis of one or both kidneys A readily movable kidney may have a more or less dilated pelvis, even when Dietl's crises do not occur, although in this condition alone real hydronephrosis does not often occur A gradual dilatation of the pelvis of the kidney may cause an abdominal discomfort from the weight and pressure on the adjacent organs, but perhaps no real pain The polyuria following a Dietl's crisis is due not only to the outflow of retained urine in the pelvis of the kidney, but also to an increased secretion from the irritated kidney

Hemorrhage into the pelvis may cause its dilation and a subsequent distention from plugging of the ureter Such blood may come from a tumor, or from varices in the pelvis or calices of the kidney

When the flow of urine is suddenly obstructed, shock may occur, as in renal colic, and the temperature may rise, as it usually does when the obstruction is caused by a plug of pus from a pyelitis or from a coagulum from a bleeding kidney The more serious the cause of the obstruction, the more frequent become the attacks of acute hydronephrosis, pain, etc

Urinary signs ordinarily do not occur when external pressure or a twisted ureter is the cause If there are renal calculi, if the kidney is bleeding, or if there is pyelitis, the urine will show blood, or pus, or both

There may be no absolute obstruction to the flow of urine, and yet the conditions may cause sufficient damming back to produce a dilated pelvis This condition is discovered by cystoscopy, the passage of the ureteral catheter and by ascertaining how much fluid the pelvis will contain Long continued irritation of a ureter may cause sufficient narrowing to prevent the passage of a ureteral catheter, or a constricted ureter may be congenital

The sensation of pain when fluid is injected into the pelvis of the kidney will indicate when the pelvis is full Although there is a difference of opinion as to the amount of liquid a normal pelvis should contain, it is probable that anything over an ounce (30 c c) should be considered abnormal

While a large hydronephrosis may ordinarily be diagnosed by physical signs and symptoms, pyelography, the injection into the pelvis of the kidney of a solution that will give definite roentgenographic pictures, will positively determine the size of a kidney pelvis, and the relationship of an abdominal tumor to the kidney

That any obstruction which causes a hydronephrosis may seriously impair the kidney structure has been shown experimentally, and Keith and Snowden[119] found that experimental hydronephrosis soon caused albuminuria, decreased phenolsulphonephthalein and lactose excretion, and increased the nonprotein nitrogen of the blood, causing renal insufficiency Death may result from this condition, unless the other kidney is in perfect health It should also be recognized that a hydronephrotic kidney may readily become infected

The kidney probably becomes painful only when its pelvis is irritated, or when there is an irritation near its capsule Consequently, disturbances located in the secreting kidney substance are rarely painful One of the most frequent causes of kidney pain is distention of the pelvis perhaps by a calculus Just how much distention the pelvis may tolerate without pain may be variable, but as previously stated, more than an ounce of fluid, sometimes less, will cause kidney ache, if not actual kidney pain The patient may get relief at night from kidney pain due to pelvic distention or pelvic irritation only by lying on the affected side, so that the respiration will not cause as much movement of this kidney Kidney pain and distress, accompanied by a diminished amount of urine, followed by the passage of a large amount of urine with relief from distress, points strongly to obstruction of the ureter and a dilatation of the kidney pelvis

At first such pain is referred to the lumbar region, and a tender point is discovered between the last rib and the erector spinae muscles, the point of tenderness being about the size of the end of the thumb This pain is stabbing and severe, and may cause vomiting As the kidney pelvis distends more and more, there is more general abdominal discomfort, and the pain and ache is diffused over the whole side and lumbar region As the pelvis reaches its full capacity, distress is referred to the abdomen, more, of course, on the affected side, and the symptoms become more like those of renal colic, but the acute obstruction is likely to be shorter than that of a renal colic as the fluid forces its way downward The pain is increased on standing up by the drag of the heavy kidney, and is lessened on lying down The pain may be as agonizing in Dietl's crisis as a renal colic The pain, if right sided, may be referred to the gallbladder region, to the appendix or to the pelvis, and render diagnosis difficult, at least while the pain is acute But a tumor in the kidney region, or a movable tumor, with the history of the case, will generally prevent an unnecessary immediate operation In a doubtful case the patient should be anesthetized and a ureteral catheter passed to ascertain whether there is an obstruction and whether relief can be given The diagnosis can thus be cleared

---

[119] Keith, N M and Snowden R R Functional Changes in Experimental Hydronephrosis, Arch Int Med, February, 1915, p 2

It is self-evident that recurring dilatations of the pelvis of the kidney or more or less permanent hydronephrosis should not be allowed to occur as the kidney structure may become permanently diseased, pyelitis may result, and the kidney may become useless It should also be remembered that serious irritation or inflammation of one kidney cannot occur without danger of involving the other kidney

Of course it is recognized that when the abdomen is fat, ordinary physical examinations and even ordinary roentgenograms of the abdomen may not make the diagnosis clear, and that cystoscopy, ureteral catheterization, pyelography, and perhaps even exploratory laparotomy are necessary to make the diagnosis positive

(To be continued)

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION W A. PUCKNER, SECRETARY

SOFOS —A mixture of sodium dihydrogen phosphate and sodium hydrogen carbonate (sodium bicarbonate), rendered stable by coating the particles of one of the constituents with disodium hydrogen phosphate One part of sofos has the same phosphate value as 1 75 parts sodium phosphate, U S P

Action and Uses—When sofos is treated with water, sodium phosphate ($Na\ HPO_4$) is formed and carbon dioxide is set free (The reaction does not go to completion, some sodium dihydrogen phosphate remaining, but this is not considered important as primary phosphate is also formed when sodium phosphate is taken into the acid gastric fluid) Sofos has the physiologic action of sodium phosphate It is claimed to have an advantage over the effervescent sodium phosphate preparations in that it is free from citrate or tartrate.

Dosage—For adults, from 5 Gm to 15 Gm (from 1 to 4 drachms) in a glassful of water, taken before effervescence ceases

Manufactured by the General Chemical Company New York City U S patent No 1 037 078 (Aug 27 1912 expires 1929) and No 1 150 901 (Aug 24 1915 expires 1932) U S trademark applied for

Sofos is a white powder having a slightly acid taste It is permanent in dry air On the addition of water effervescence occurs with formation of secondary sodium phosphate and evolution of carbon dioxide (When treated with water at room temperature about 70 per cent. of the available carbon dioxide is liberated when treated with human gastric fluid about 93 per cent. of the available carbon dioxide is set free)

Assay—Dissolve about 0 5 gm of sofos accurately weighed in 100 Cc. of water and after effervescence ceases acidify with a small excess of hydrochloric acid Boil the solution until the carbon dioxide is removed cool and render ammoniacal. The phosphorus content is then determined in the usual manner weighing as magnesium pyrophosphate The amount of phosphate radical (PO_4) present should not be less than 46 per cent

Special Article

THE MEDICAL OFFICER OF THE ARMY

VI

FIELD SERVICE REGULATIONS

These regulations are solely for the government of the army in time of war, while at maneuvers or in other exercises simulating warfare Regulations of any kind written for peace times cannot, of course, readily be applied to war conditions Therefore, new rules must be prepared If these rules have been prepared before war takes place, officers entrusted with the carrying out of the regulations have already become familiar with them The rules have the same interest to the medical officer as to the line officer, and the subject requires careful consideration by every one on his entrance into the service

These regulations will be discussed as they are arranged in the "Field Service Regulations" The first chapter treats of the land forces of the United States According to the present laws these land forces consist of the Regular Army, the National Guard and any other forces called into service in time of war These forces are divided into the mobile army and the coast artillery, the mobile army consisting of troops which are to be used in actual field operations, and the coast artillery of special troops for service in manning the coast fortifications of our country

THE DIVISION

The unit of the mobile army is the division It consists in round numbers of 28,000 men, and is a self-sustaining unit in that all branches of the service are represented and each branch takes its proper position In each division are nine regiments of infantry, two of field artillery, one of cavalry, one of engineers, one battalion of signal corps, four ambulance companies, four field hospital companies, and the proper supply trains Three or more of these divisions may be formed into an army corps under the control of a corps commander Though the coast artillery is not a part of the mobile army, certain regiments, preferably of infantry, may be detailed as coast artillery supports Their duty is to protect the fortification from attacks by landing parties while the coast artillery itself is serving the guns of the fortification

TABLES OF ORGANIZATION

The details of the formation of the different parts of the division and the field army are laid down in the 'Tables of Organization" These give the personnel and transportation of all regiments, battalions or other units, with their proper distribution

MILITARY INFORMATION

The next chapter treats of military information While this information is primarily of interest to the line, and relates to the enemy, his strength and location, still, for the proper handling of the medical department in the field, the service of the channels of military information is necessary It is important first, to obtain reliable information in regard to the local resources of the towns and cities with reference to their ability to accommodate large numbers of sick and wounded, and to furnish medical supplies in sufficient quantity, also to obtain a knowledge of the roads, railroads, and the general sanitary condition of the territory in which operations are conducted This information is obtained by air and cavalry reconnoissance in addition to the services of spies and secret agents

From a medical standpoint, the cavalry reconnoissance work is especially interesting This cavalry may be independent of the division and serving directly under the corps commander, or it may be divisional and a part of the cavalry regiment assigned to each division From the nature of the work it can readily be understood that great difficulty is encountered in properly caring for and evacuating the wounded Medical officers and sanitary troops are with each cavalry regiment, but no ambulances can be depended on to keep up with a rapidly moving mounted command Any wounded must therefore receive first aid and then be left at some farmhouse or other convenient place until removal farther to the rear The wounded are made as comfortable as possible, and, if necessary, an enlisted man is left with them to administer to their wants until they are taken in charge by the sanitary personnel of the foot troops marching in rear or are picked up by the cavalry on its return

THE ADVANCE GUARD

With all moving commands, security is an important factor If the command is advancing, advance guards are provided The advance guard consists of from one twentieth to one third of the entire command The larger the command the larger the advanced guard in proportion to the total force A division, for instance, has an advance guard consisting normally of one brigade — three regiments — of infantry, one battalion of artillery, one squadron of cavalry, one company of engineers and one ambulance company This is known as a reenforced brigade, and marches a mile or more in front of the main body The advance guard is divided into three parts the advance party, consisting of a few men thrown out in front, the support and the reserve, the reserve containing the major portion of the advance guard and being its rearmost portion of the advance guard The ambulance company, which is usually minus its transportation, this having been left back with the trains, follows directly in the rear of the reserve The necessity of having an ambulance company in this location is great The advance guard frequently becomes engaged long before the main body can be placed on the firing line Therefore some assistance greater than that furnished by the regimental detachments must be provided The ambulance company so assigned will establish a dressing station, if necessary, and as long as required, and rapidly collect the wounded so that their further evacuation can be facilitated

THE FLANK GUARD

When a command is moving in such a way that the enemy is liable to attack their flank, a flank guard is used to protect the column This flank guard may consist of any number of men, and has with it its proper proportion of sanitary troops on the basis, as a rule, of one ambulance company to a brigade This ambulance company follows in the rear of the last combatant unit of the flank guard, and in case of engagement, will act in the same way as the ambulance company assigned to the advance guard

THE REAR GUARD

When a command is retreating and a rear guard is formed, sanitary assistance must also be provided Wounded occurring in an advance guard engagement can be more readily handled than the wounded occurring in rear guard engagements The main body in the former is coming forward, and the regular divisional evacuation service can take care of them, but with the latter the whole command is retreating, and if the wounded are not carried with them they will fall into the hands of the enemy Therefore, not only must this ambulance company with the rear guard have its ambulances with it, but also, if heavy fighting is liable to occur, more than one ambulance company to a brigade will sometimes be necessary The wounded are succored and rapidly placed in the ambulances to be removed farther to the rear

THE FIELD ORDER

General and special orders have been explained in these articles, but a type of order used only in the field is outlined here This is called a field order and has a certain, regular form It is, as a rule, divided into five paragraphs The first paragraph gives information of the enemy and of our own troops that the commander desires to publish The second gives his general plan of operations The third specifies what each combatant unit of his command is to do The fourth outlines the specific duties of the sanitary troops, and the location of the supply trains The fifth shows where the commander himself can be found

CONDUCT OF MARCHES

The next chapter of the "Field Service Regulations" outlines the conduct of marches From a sanitary standpoint, marches are of great interest In the first place, the sanitation of the area through which the march is conducted must receive attention from the medical officers The habits of the men, water supply, and disposal of wastes while on the march are problems of more or less gravity, and if time permits, the greatest care is necessary to see that the men themselves are kept in the most perfect physical condition possible With an infantry command, the feet of the soldier must be looked after carefully Before the march takes place, a foot inspection is held to eliminate those unable to stand the hardships of the march and to correct any defects noted After each day's march, any sore feet must be promptly treated so that as few men as possible will have to drop out Furthermore, the care and evacuation of the sick occurring during a march constitutes sometimes a problem of great gravity While the command is in motion, all men taken sick are permitted to leave the ranks and are picked up by the ambulances following behind When the movement is not in the presence of the enemy, ambulances are distributed throughout the command in the proportion of one to a regiment, and this ambulance follows directly behind the unit to which it is assigned When camp is reached immediate arrangements must be made for the care of these sick and also any sick that may occur during the stay at this camping place. This, of course, is placed in the hands of a field hospital company specially detailed for the purpose, but it is not contemplated that this field hospital should pitch its tentage. Some farmhouse or other building suitable for the purpose and conveniently located is taken over as a temporary hospital, and only such supplies as are absolutely necessary for the care of the sick are unpacked from the wagons. When the command moves off the next day, the field hospital company does not remain but leaves only sufficient personnel to care for the sick until the service of the line of communications can come forward and remove them to hospitals in the rear.

SANITATION OF CAMP SITES

The usual march, whether in peace or in war, begins early in the morning, and before the command leaves camp it is the duty of the medical officers attached to see that the sanitary condition of the camp site is satisfactory. It must be understood that in war operations camp sites may be occupied by a number of different commands, one after another, and that their sanitary condition must be good at all times.

RATE OF MARCH

The rate of march for infantry or any other foot troops is from 2¼ to 2½ miles an hour, and the length of the average daily march is 15 miles, but with large bodies of troops, consisting of a division or more, 12 miles a day is about all that can be accomplished. After the command has been on the road for an hour, a halt of from fifteen to twenty minutes is allowed so that the men can attend to the calls of nature. As a rule, during every succeeding hour a ten minute halt is allowed.

POSITION OF THE SANITARY UNITS

When a division is on the road, the sanitary units are assigned to a regular position in the line of march. One ambulance company, as has been shown, accompanies the advance guard, the other three companies follow the last combatant unit of the main body. The field hospital companies are with the trains, and their position in the trains depends on whether the march is conducted in hostile territory or at a time when no fighting is expected. In the former case they precede all of the trains but the ammunition train, but in the latter case the field trains which contain the rations and baggage of the regiments come first, as they will be needed first, and the field hospital companies follow immediately after them.

CARE OF THE SICK IN CAMP

When camp is made, in addition to the question of camp sanitation, which must receive careful attention at all times, the care of the sick must also be provided for. It has been shown that a temporary hospital is established and the sick requiring hospital attention are moved to this hospital, but other arrangements must be made for those cases which require only slight attention. To do this camp infirmaries are established in the proportion, as a rule, of one to a brigade, and they are located at a point convenient to all of the regiments of this brigade. The camp infirmary is nothing but a small dispensary. A wagon is provided to carry its supplies and there is a noncommissioned officer in immediate charge of the equipment, but the personnel to look after the sick brought to this camp infirmary must be provided by the regiment which it serves. The sick are brought to the infirmary, and either receive treatment or are removed to the temporary camp hospital by an ambulance company detailed for the purpose.

SANITARY SERVICE IN COMBAT

Combat is offensive or defensive. The offensive combat may be either a rencounter engagement or a planned attack. In the rencounter the enemy is encountered usually first by the advance guard, and the other units of the command are fed into the battle line as required, without any previously planned procedure. In the planned attack, on the other hand, the enemy's location is positively known and a regular plan is made beforehand for the entire attack. With either form of attack the ambulance companies are not used at once, but dressing stations are established only when required, and then where the wounded are thickest, and not equally throughout the entire command. In a defensive engagement, on the other hand, a different procedure can sometimes be followed. If a defensive position is taken with prepared fortifications and a determination to hold this position, dressing stations can be established beforehand and prepared for the reception of the wounded. This is the procedure that has been carried out in the fighting in Europe on the western front. If the engagement, whether offensive or defensive, has been unsuccessful, efforts must be made by the sanitary troops to remove all the wounded possible in the transportation at their command, but frequently this is impossible, and collections of wounded, or even entire field hospitals filled with wounded, must be left in the hands of the enemy. If this is done, sufficient personnel must be provided to care for these wounded until the enemy himself can take over the work. In case of a successful issue of the engagement, the police of the battlefield must receive attention. The removal of arms, ammunition, guns, etc., is naturally in the hands of the line, but the sanitary service must remove the wounded as rapidly as possible. If the fighting has been severe and the casualties heavy, the sanitary personnel may be insufficient for this work, and in that case assistance is requested from the line, and battalions or even regiments may be detailed to help in this work. It must not be understood that this assistance can be always counted on. Frequently the whole command rapidly moves off to the pursuit of the fleeing enemy, leaving the sanitary service to perform its duties as best it can. The dead are buried by line troops detailed for the purpose, but a medical officer is usually provided to see that this burial is done in a thoroughly sanitary manner.

(To be continued)

Extempore Speaking.—In Grant Duff's *Notes from a Diary* (1896 to Jan. 23, 1901) he records that he asked the Bishop of Ripon whether he had not very exceptional facility in extempore speaking. The bishop said, and with justice, that real extempore speaking is very rare, in nine cases out of ten what appears to be extempore has been prepared long before, and laid up unconsciously in the recollection. He went on to cite an answer made about a sermon which had struck one of the listeners very much. 'I wonder how long it took to prepare that sermon?' The answer was, "Fifty years."—*Brit. Med. Jour.* Jan. 27, 1917.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street . . Chicago, Ill.

Cable Address . . "Medic, Chicago"

Subscription price . . . . . . Five dollars per annum in advance

Contributors, subscribers and readers will find important information on the second advertising page following the reading matter

SATURDAY, MAY 26, 1917

EPIDEMIC MENINGITIS AND THE ARMY

Of the acute infectious diseases none is feared more than epidemic meningitis, and justly, because of the frightful death rate, to say nothing of the suffering and disability Even under the most favorable circumstances, which means the prompt intraspinal use of potent antiserum, it has not been possible to reduce the death rate much below 30 per cent Consequently the importance of prevention cannot be overstated The conditions in military camps and garrisons clearly favor outbreaks among soldiers, as shown repeatedly in the course of epidemics, and most recently by the outbreaks among British and Canadian troops About 1840 the disease was carried from one end of France to the other by the movements of a certain regiment of infantry in which the infection had established itself[1] Like diphtheria, epidemic meningitis is spread by contact with the sick and with healthy carriers, and as the meningococcus carriers are always more numerous than the meningitis patients and move about freely (unless detected and detained), the carrier undoubtedly is the most important agent in spreading the disease The presence of an occasional carrier among troops or under other conditions which bring people into close contact may result in the development of a large number of more or less temporary carriers of which a certain number for various reasons not clearly understood fall sick of the disease

That carriers far outnumber the patients has been established by numerous observations for example, of the sixteen room-mates of a soldier stricken with meningitis, ten were carriers, and recently in England as many as 400 carriers have been found at one time in large garrisons in which the development of cases of meningitis led to systematic bacteriologic examinations of the nasopharynx of large numbers of men The occurrence of epidemic meningitis is thus direct evidence of the presence of carriers Naturally, in crowded quarters, a long chain of carriers may be formed, link by link, and we realize the great importance of preventing the establishment of starting points for such chain carriers, any single one of which may convey the meningococcus to susceptible persons and be the means of setting on foot meningitis in previously nonepidemic places

In England the spread of epidemic meningitis among soldiers (and through soldiers to the civilian population) has been combated with conspicuous energy and success In addition to prompt isolation of patients, segregation and examination of all contacts with detention of those found to be carriers until free from meningococci have been carried out systematically and in some instances on a very large scale For the purpose there was established a central laboratory and some thirty-seven district laboratories One problem that arose was that of an efficient culture medium easily prepared in the large quantities needed As the meningococcus requires for prompt growth certain special substances hitherto supplied by the use of ascitic fluid or blood, neither of which under the circumstances was procurable in sufficient quantities or sterile, the blood having the drawback also of making the medium opaque, Gordon and his associates solved the problem by working out a pea extract trypsin agar which answers the purpose satisfactorily[2] In most of the carriers the meningococci disappear in a short time, but in some they persist longer, and interesting experiments have been made (Gordon and associates) on the effects of inhalation by carriers of nebulized disinfectants, chloramin in from 0 5 to 1 per cent solution apparently giving the most promising results The meningococcus is little resistant to disinfectants, but as it is found chiefly in the nasopharynx, the question is to reach all its parts In making cultures, the posterior wall of the pharynx must be swabbed, and in Foster and Gaskell's useful book a special swab constructed for this purpose is described These authors also give in detail the various points considered by British workers in the differentiation of the meningococcus from other gram negative cocci in cultures from the nasopharynx, but this question cannot be discussed further now except to mention that Gordon believes there may be four definite and permanent groups of meningococci determinable by agglutination with immune serum for each group If this proves true, a great step in advance will have been made, not only in the diagnosis of cultures from the throat, but also, we may hope, in the preparation of potent immune serum for therapeutic purposes, in which case the determination of the particular group to which belongs the meningococcus concerned in the given instance of meningitis would have to be made by agglutination tests or other means in order that the proper antiserum might be injected We know from earlier work that the meningococci fall into distinct groups, and it seems altogether reasonable that by following such grouping, improvements both in diagnosis and serotherapy may result

---

[1] Foster and Gaskell Cerebrospinal Fever, Cambridge, 1916

[2] Gordon Jour Roy Army Med Corps, 1915 24, 455 Brit Med Jour, 1916, 2, 673 and 678 Foster and Gaskell (Footnote 1)

The special object at this time is to direct attention to the situation in this country Epidemic meningitis is now prevalent to an unusual degree in various places — in Philadelphia, Cleveland, St Louis, Hartford, Minneapolis, New York, Chicago and elsewhere[3] — a matter of great importance in itself and of additional concern because we are about to establish a large number of training camps for soldiers The question is, Are we as well prepared as we ought to be to prevent the spread of epidemic meningitis in our cities and communities and to keep it out of our military encampments? If not, steps should be taken immediately by civilian and military authorities to arrest the spread of the disease by isolation and proper treatment of the sick and by detection and confinement of all carriers until free from meningococci

THE PITUITARY IN CHRONIC POLYURIA

To the publications of Sir Edward Schäfer and his collaborators in Edinburgh is due the widely published and generally accepted statement that extracts of the posterior lobe (including the pars intermedia) of the pituitary gland produce diuresis The pituitary is also one of the few sources of substances reported to produce an increased flow of milk from the mammary gland This alleged galactogogic function has, however, been challenged and denied,[4] and the experiments to ascertain the diuretic potency have given far from concordant results The actual statements based alike on human and on animal experiments are frankly contradictory

There are many evidences of some sort of connection between the pituitary body and renal activity, but the tradition of the diuretic effect has persisted as the expression of this relationship Experiments by S A Matthews showed that in careful extirpation of the posterior lobe by Aschner's method[5] there results often an enormous polyuria, or diabetes insipidus A dog of 4 kg may secrete as much as 3 liters (quarts) of urine a day This is not accompanied by any lowering of sugar tolerance, nor is the operation followed or accompanied by glycosuria[6] This result of removal of pituitary function does not speak for a normal diuretic function on the part of the pituitary, but gives indications of a contrary influence In harmony with it, K Motzfeldt[7] has come to the conclusion that the pituitary body, as shown by its extracts, exerts a constant, physiologic influence on the functional activity of the kidneys in human beings This action consists in a checking of the flow of urine — an antidiuretic effect which is most marked when the diuresis is high Motzfeldt's researches, carried out in the Laboratory for Surgical Research at the Harvard Medical School, indicate that the inconstant and conflicting results of the past in respect to the relation of pituitary extracts to renal function are attributable to unsuitable methods of study After producing typical polyurias experimentally he was able to check them definitely with extracts of the pars intermedia and posterior lobe of the hypophysis, given orally, subcutaneously or intravenously Extracts of the anterior lobe show a similar effect, but only to a slight degree

This constant antidiuretic effect, which is independent of changes in blood pressure or intestinal absorption, is similar to that produced by beta-imidazolylethylamin (histamin), para-oxyphenylethylamin (tyramin), small doses of nicotin, large doses of caffein, and by extracts of the suprarenal cortex These amins are at present believed to have a general stimulating effect on the sympathetic nervous system The antidiuretic potency is practically absent in any attempt to check so-called salt diuresis These facts are interpreted to signify that the antidiuretic action exerted by pituitary extracts, in the cases studied, is caused by the stimulation of the sympathetic nervous system, and that the renal vasomotor system in this respect is of chief importance

For many years diabetes insipidus, or chronic polyuria, has been associated by clinicians with vasomotor disturbances Motzfeldt believes that the new points of view formulated by his studies "bring the polyurias related to disorders of the nervous system and the polyurias of pituitary origin in closer contact" From the standpoint of the clinic one thinks at once of the possible use of the posterior lobe extracts in the management of suitable chronic polyurias — an application of organotherapy which has already been attempted[8]

CONNECTIVE TISSUE CELLS AND PHAGOCYTOSIS

The importance of phagocytosis in the defensive reactions of the organism certainly has not become diminished through the newer investigations in the field of immunology It is not only in the protective responses of the body against bacteria that the phagocytic powers of body cells are brought into play, they are said to accompany the involution of certain organs and to attend various atrophic changes in tissues, acting there in the capacity of scavengers which remove and destroy the discarded debris[9] The phagocytosis exerted by some of the white blood cells is well appreciated, but it is not so generally known that other cells of the circulating medium can digest foreign particles

Metchnikoff distinguished between the "motile" and "fixed" phagocytes, the former the leukocytes of the blood, the latter certain connective tissue cells, endothelial cells, splenic pulp cells, and certain cellular elements of the lymph nodes, the neuroglia tissue, and, in fact, all phagocytic cells which are ordinarily confined to some definite localization in the body.[9] The latter groups are regarded as the ones concerned more particularly with the management of cellular detritus. It is thus evident that phagocytosis has been ascribed to a considerable variety of cells.

---

[3] Public Health Reports 1917 **32** 639

[4] Pituitary Extract and Milk Secretion editorial THE JOURNAL A M A Dec. 26 1914 p 2292 Some Aspects of Lactation Nov 27 1915 p 1918

[5] Aschner Ueber die Funktion der Hypophyse Arch f d. ges. Physiol 1912 **146** 1

[6] Mathews A P Physiological Chemistry 1915 p 648

[7] Experimental Studies on the Relation of the Pituitary Body to Renal Function Jour Exper Med 1917 **25**, 153

[8] Motzfeldt K. Hypofyse og diurese Norsk Mag. f Lægeviden k. 1914 **75**, 1292

[9] Compare Zinsser H. Infection and Resistance New York 1914 from which some of the statements made above are taken

Zinsser has intimated that the identification of these structural elements in tissues is often a purely morphologic problem fraught with many possibilities of error. He ventures the assertion, nevertheless, that from a standpoint of phagocytic potency probably the most active fixed tissue cells are the endothelial cells of the blood vessels and those which line the serous cavities and the sinuses of the lymph nodes and the spleen. Among other varieties certain connective tissue cells are included.

Jones and Rous[10] of the Rockefeller Institute for Medical Research agree, likewise, that, in connective tissue, phagocytosis of bacteria and particles of unorganized matter occurs not infrequently. It can sometimes be seen about bacterial foci, and it is common in the neighborhood of old blood extravasations. They point out that such connective tissue as is ordinarily under observation is a congeries of cells of at least two sorts, namely, fibroblasts and endothelial cells from the blood and lymph channels. The latter are, of course, known to have phagocytic power.

Will the activity of such endothelial cells along with that of wandering cells account entirely for the phagocytosis observed in connective tissue? The new methods of Jones and Rous for obtaining individual, living cells from the fixed tissues by tryptic digestion has given an opportunity to make a direct test of the possible phagocytic power of the fibroblasts alone. The phagocytic ability of these suspensions of isolated cells against carmin and bacteria has been tested. The great majority of them, we are told,[10] fail to take up either, but a few large cells are able to do so. They will ingest bacteria only when serum is present, that is, they require the interaction of opsonins.

Jones and Rous[10] now state that there is good reason to suppose that these phagocytic cells are endothelial in nature. Should they prove to be fibroblasts, like the other elements present, the fact will remain that the phagocytic power of fibroblasts is practically negligible. Their failure to ingest foreign matter in vivo is to be laid not to the obstacles offered by the tissues they compose, but to an inherent lack of ability on their part. If these conclusions are valid, the phagocytosis of blood pigment, bacteria, etc., which takes place in granulation tissue is probably carried on wholly by endothelial cells and wandering cells.

---

[10] Jones, F. S., and Rous, P.: The Phagocytic Power of Connective Tissue Cells, Jour. Exper. Med., 1917, 25, 189.

Current Comment

HAVE YOU ACCEPTED YOUR COMMISSION?

In a letter from the Surgeon General's Office under date of May 17 it is stated that that office has recommended for commission in the Reserve Corps a total of 4,224 men, and that at the time of writing only 1,773 of those commissioned had sent their acceptances to the Adjutant General's Office, leaving 2,451 commissions at this time unaccepted. All these commissions had been out a sufficient length of time for the acceptances to be sent back. In some instances several months had intervened. It must be clearly understood that the receipt of a commission does not complete the enrolment of the medical officer. It is the duty of those men who have made application for commission in the Medical Reserve Corps to accept that commission, unless circumstances have developed in the interim between making application and receiving commission that warrant them in withdrawing their applications. In such cases, a letter to this effect should be sent to the Adjutant General, returning the commission and stating why. We appeal to those who have received commissions and who have not sent their acceptances to the Adjutant General's Office at Washington to do so at once. All that is asked is that the physician act at least in as respectful a manner toward his government as one business man acts toward another. Further, it should be realized that until one is fully enrolled the books, pamphlets, orders and various information that the government supplies to reserve officers will not be sent to him. Thus he will not be prepared when the call does come.

THE DUTY OF THE MEDICAL PROFESSION

In the National Guard, when its quota is full, there will be 433,800 men, in the new regular army there will be 293,000 men, and in the first draft of the new national army there will be 500,000 men. This makes an army of 1,226,800, whose mobilization is practically immediate. Such an army calls for 8,600 medical men as a minimum provision. This includes only the medical officers who will actually be with the army in the camps, and on active duty — not those who may go to Europe with hospital units or the 1,000 men asked for in France, or the large number of medical men that will be required for administrative work. This is possibly but the beginning. The 500,000 called for in the first draft of the new national army may be followed by a second call for 500,000, possibly for a third 500,000, and even it may be for a fourth 500,000, making an army of 2,000,000 men, as has been prophesied will be necessary. In such an event the medical department of the army will call for a total of 20,000 medical officers, which is nearly 15,000 more than have yet been commissioned. There are in the United States approximately 145,000 physicians, consequently less than one in seven is needed even for full preparedness. Is it possible that there shall finally be difficulty in obtaining voluntarily the medical men needed? We cannot believe so. It is inconceivable that conscription of physicians will ever be necessary But if we are to get the necessary 20,000 on the volunteer system there must be more eagerness for service shown on the part of our profession than has thus far been shown The Journal this week carries a new blank[1] to nearly 70,000 medical men May every man who receives it and who is within the age limit — under 55 — and physically and professionally qualified, recognize his debt to his country and his responsibility to his profession!

COLONEL GOODWIN AND THE MEDICAL OFFICER ON ACTIVE SERVICE

Colonel Goodwin of the British Commission to the United States has addressed organizations of medical officers in several of our cities, appealing to them for their aid and telling of conditions met on the West front early in the war Colonel Goodwin took part in the retreat from Mons in August and September, 1914 His description of the action of a cavalry field ambulance in that significant engagement, a time when for ten days troops were continually moving, unable to rest, unable to remove their clothes — a time spent almost wholly in the saddle or on foot — is a narrative which by its simplicity, its statement of cold, inspiring facts, thrilled every audience which has had the enviable opportunity of hearing him In his story there is one portion which is particularly noteworthy He describes the days of activity, the terrible fatigue of men and officers, the utter inability to respond with renewed effort to new demands Then came the time when at last the men were able to halt for rest The officers did not at once, however, take advantage of this opportunity The duties of the medical officer, says Colonel Goodwin, are first to take care of his wounded, second, to see that his horses are taken care of This must be done at once Otherwise the horses would be neglected "since the men are so dog-tired," as Colonel Goodwin expressed it Third, the officer sees to it that his men are well fed and quartered He must think of himself last On the medical officer fall these responsibilities

IMMEDIATE DUTIES OF MEDICAL RESERVE OFFICERS

Regularly commissioned Medical Reserve Officers, as well as those who are applying, or who are thinking of applying, for such commission are inquiring as to when they will be put on active duty and what that duty will be Many letters are received in which the writers express the desire to be ready when the call comes, but do not want to make definite arrangements regarding their practice until they know how soon they may have to respond to the call of duty It is impossible even for government officials to give the information positively as regards any particular individual The following is a general statement that may be a basis from which each one may draw his own conclusions It is probable that many Reserve Corps Officers — those of rather mature age — will be put on active duty to examine recruits When the examination of these 500,000 recruits actually begins, it will put to the test the "preparedness" of the medical profession To make a physical examination of 500,000, to give the series of prophylactic injections for typhoid fever and, in the majority of recruits, vaccinate against smallpox, will be an extensive and a serious undertaking But it probably will be found that nearer 700,000 will have to be examined before the 500,000 "fit" men are secured Hence we repeat again, the big, immediate work before those of our profession who have volunteered is that of examining recruits Another point to be considered is this As they pass their physical examination the recruits will be mobilized in camps to be located in various parts of the country Some eighteen camps, it is stated, are being selected To supply these camps will require 3,500 medical officers — that is, seven medical officers for each 1,000 men These officers, since they have been drawn from civilian life, will have to meet conditions and problems and perform duties entirely different from those to which they have been accustomed — so different that special training and special instruction are positively necessary Hence these 3,500 men must go through a course of training Preliminary details for this training, we understand, are now being worked out There will be three training camps for medical officers, Fort Oglethorpe, Fort Benjamin Harrison, and Fort Riley, each to accommodate 600 men In addition, smaller groups of medical men will be assigned to, and take their training where reserve officers of the line are taking their special training As a matter of fact, already quite a number of medical men have been assigned to training camps Of course the Reserve Officers when trained will be transferred, part to the mobilization camps, and part to assist in the examination of recruits The men assigned to these camps for training will probably be the younger men — those under 45

THE FOOD SUPPLY IN WAR TIME

The maintenance of the food supply of the army and of the civilian population of the country is as important a question as any which confronts our leaders in this time of rapid action and stirring events In every foreign country food commissions were appointed early in the war to control this problem A few weeks ago The Journal[1] emphasized the advisability of appointing at once in this country an appropriate scientific body to advise on these questions In this issue appears the report of a meeting of the New York Academy of Medicine especially to consider this subject The speakers, all of whom have been either eye-witnesses of conditions abroad or have specialized in food problems, were wholly agreed on several fundamental propositions In brief, these were that our people must have a definite quantity of food suitable to their tastes as determined by their usual diet, second, that we must be prepared to supply our allies with all the food that can possibly be spared after our own needs are satisfied, and third, that our enormous waste of food material must be controlled in some such manner as our allies and the enemy are controlling waste To control these problems satisfactorily, the aid of scientific men who know what the physiologic needs of human beings are and what various conditions of life demand, must be consulted In the appointment of a food board such men should have the first consideration As Graham Lusk says "The successful accomplishment of this task is the only factor that will save the world in the present situation"

---

[1] For procedure see page 1558.

[1] The Food Supply editorial The Journal A M A, April 28 1917 p 1262

"ABROGATE THE PATENT ON SALVARSAN"

Under this caption we publish this week — in the Correspondence Department — a communication from Drs Finney and Walker of Baltimore They present reasons for the abrogation of the patent on salvarsan additional to those given by the committee of the Chicago Medical Society and the St Louis Medical Society, which were published five weeks ago[1] Drs Finney and Walker call for action on the part of medical men — medical societies especially In a case of this kind appeals, to be effective, should be made to the individual Congressmen or Senators who represent the petitioners But while resolutions count, individual action is needed also Furthermore — and we would especially emphasize this — it is not the medical profession that is suffering, it is not the medical profession that has had to pay the enormous price for this product, it is the people Consequently, appeal should be made to the people to aid in getting justice for themselves in this matter by the action of their own representatives

URGENT NEED FOR YOUNG MEN FOR THE MEDICAL CORPS

Some weeks ago we called attention to the fact that when the full quota of the regular army, as enlarged by the act of June 3, 1916, was called there would be immediate and positive need for a large increase in the number of permanent medical officers The call has now been made, and this enlarged regular army will soon be manned and equipped As enlarged, it will consist of 293,000 men, and will need 2,051 medical officers There are at the present time, all told, barely 550 The immediate need, therefore, is for 1,500 young medical men who are willing to make the army their chosen field by joining the Medical Corps The life and professional work of the regular army medical officer has many attractions It nowadays offers opportunities for the scientifically inclined that it did not offer until recent years The position is one of honor, one that commands respect, and one that presents many opportunities for the ambitious Considering the number of men available for the position, there should be no difficulty in securing the needed 1,500 Basing the statement on the number of physicians who have graduated during the last six years, there are at least 20,000 who are eligible, so far as age and professional standing are concerned The age limit until Jan 1, 1918, is 34 years, after that, 32 years It cannot be emphasized too strongly that the needs are urgent, and that those who are considering making application for membership in the Medical Corps should do so at once

Medical Mobilization and the War

Information Regarding Appointment in the Medical Reserve Corps of the U S Army

The Journal this week publishes again a personal application blank for the Medical Reserve Corps The following facts should be borne in mind

Qualifications—The applicant must be a citizen of the United States, between 22 and 55 years of age, a graduate of a reputable medical school, must have qualified to practice medicine in some state, and must be in the active practice of his profession "Active practice" includes those who specialize in eye, ear, nose and throat, dermatology, neurology, obstetrics, etc

Procedure.—Note carefully the following procedure 1 Fill out the personal application blank, read carefully every question before answering it, and write distinctly 2 After filling out the blank subscribe and swear to it before a notary public or other person authorized to administer oaths This is very essential, the form is not complete without this procedure 3 Obtain letters of recommendation from at least two citizens who know you It would be well if at least one of these were a physician Then attach these letters to your application blank Keep copies for your own information and future satisfaction 4 Communicate with the examining board most convenient to you—a list of boards up to May 17 is printed below—and arrange for an examination You can send your application blank and letters or take them with you when you appear before the board When you report to the board for examination, if you have not already done so, present your application blank, your testimonials, your state certificate and if of foreign birth, documentary evidence of your full citizenship

Examination—The professional examination for the Reserve Corps is not severe, is oral and practical in character

Medical Corps—It must be remembered that there is an urgent demand for members of the Medical Corps We shall be glad to send application blanks to those who wish to apply for membership in this corps A physician may be commissioned in the Medical Corps of the Army provided he is between 22 and 32 years of age (34 up to Jan 1, 1918), a citizen of the United States and a graduate of a reputable medical college He must have had also at least one year's hospital training subsequent to graduation, including practical experience in the practice of medicine, surgery and obstetrics and will be expected to present evidence to that effect Whether or not he is married has no effect on his eligibility to the Medical Corps He must pass a preliminary examination and a final or qualifying examination in accordance with the rules and regulations which may be obtained on application

War Registration and the New York Session

Under the Selective Conscription Act every male civilian physician between 21 and 30 years of age, inclusive, must register at the place of his permanent residence This registration must be effected on Tuesday, June 5 This date is the second day of the New York Session of the American Medical Association Registration for the draft cannot be effected at any other place than the residence of the man registering or at any other time The regulations, how-

---

[1] The Journal, April 21, 1917, p 1203, "Abolition of Patents on Salvarsan"

PERSONAL HISTORY OF APPLICANT FOR APPOINTMENT IN THE MEDICAL RESERVE CORPS, UNITED STATES ARMY.

Give your name *in full* (including your full middle name)

The date of your birth The place of your birth

When and where were you naturalized (if of alien birth)?

Are you married or single? Have you any children, if so, how many?

What is your height, in inches? Your weight, in pounds?

Give the nature and dates of all serious sicknesses and injuries which you have suffered

Do you labor under any mental or physical infirmity which could interfere with the efficient discharge by you of the duties of a medical officer?

If either parent, or brother, or sister has died, state cause and age in each case.

Do you use intoxicating liquors or narcotics, if so, to what extent?

Have you found your health or habits to interfere with your success in civil life?

What academy, high school, college, or university have you attended? State periods of attendance from year to year, and whether you were graduated, giving date or dates of graduation

Name any other educational advantage you have had, such as private tuition foreign travel, etc.

Give all literary or scientific degrees you have taken, if any, names of institutions granting them, and dates

With what ancient or modern languages or branches of science are you acquainted?

When did you begin the study of medicine, and under whose direction? His residence?

How many courses of lectures have you attended? Names of colleges and dates.

When and where were you graduated in medicine?

Have you been before a State Examining Board? If so, state when, where, and with what result

Have you had service in a hospital? If so, state where and in what capacity, giving inclusive dates of each kind of service

What clinical experience have you had in dispensary or private practice?

Have you paid particular attention to any specialty in medicine, if so, what branch?

What opportunities for instruction or practice in operative surgery have you had?

Have you previously been an applicant for entry into the United States service? If so, state when, where, and with what result

Are you a member of the organized militia? If so, state with what organization and in what capacity

Have you been in the military or naval service of the United States? If so, give inclusive dates of service with each organization, designating it

In case of war or threatened war, will you accept active service for duty with the Army, should your services be needed?

What occupation, if any, have you followed other than that of student or practitioner?

Present or temporary address †

Permanent residence †

I CERTIFY that to the best of my knowledge and belief the above statements are true

Signature ☞

Date, , *191*

Subscribed and sworn to before me, this day of A D 191

[SEAL]

[Signature and official title]

---

† The candidate should give his *present address for correspondence*, and also his permanent address to which he desires commission sent should he be appointed.

FORM 149
W D, S G O
(Revised March 6 1912)

, *M D*,

OF

, *191*

FURNISHES PERSONAL HISTORY,
IN CONNECTION WITH
APPLICATION FOR APPOINTMENT
IN THE
MEDICAL RESERVE CORPS,
U S ARMY

Inclosures

ever, permit a prospective registrant to perform that part of the registration process that is essentially personal in advance of the registration day if he is to be absent from his home on that day According to information received from the office of the Provost Marshal General, a physician who will be absent from his permanent place of residence on registration day may apply to the county clerk, or to the city clerk if he lives in a community where registration is to be effected on the basis of the city, as a unit, for a registration card The clerk will prepare a card and deliver it to the applicant The applicant must then deliver the card filled out or see that by mail or by responsible messenger it is delivered to the chief registrar of the registration precinct in which the applicant would normally register so as to be in his hands not later than June 5 He should leave or send with it a self-addressed stamped envelope so that on registration day the chief registrar can mail him a registration certificate as evidence that the requirements of the law have been complied with Every physician who is within the class required to register and whose attendance at the New York meeting will compel him to be absent from his permanent place of residence on Tuesday, June 5, should without fail attend to all preliminaries of registration before leaving home

Physicians to Assist in Registration for Military Service

The President has prescribed certain registration regulations for the registration of June 5

Registration is to be made primarily on the basis of the county as a unit. In each county or similar subdivision it is to be entrusted to a board of registration consisting of at least three members named by the governor Normally each such board is to consist of the sheriff the county clerk and the county physician If there is no medical officer in the county or other similar registration subdivision, or where the medical or health officer of any such subdivision is not a licensed physician, or where the governor deems it inadvisable to constitute a local medical officer surgeon of the board the governor may name a licensed physician to act in that capacity But no member of a registration board may be connected with the military establishment.

Cities of 30 000 population and over are not to be within the jurisdiction of the county board but are to be under the jurisdiction of the mayor or the officer or officers corresponding to the mayor and such cities may be divided into registration districts of approximately 30,000 population each if it is deemed advisable to do so a separate registration board being appointed by the mayor, for each such district. A licensed physician is to be appointed on each board.

If a member of a registration board does not volunteer his services without compensation he will be paid $7 50 as a lump sum for his work, but volunteer service as a matter of patriotism will be welcomed This compensation will be entirely separate from compensation rendered in connection with the further execution of the law such as those that will be incident to the making of the selective draft It is now intended to convert registration boards into boards for the making of the draft but regulations governing compensation for such services have not yet been formulated.

Medical Reserve Corps Officers Assigned to Active Duty

The following officers of the Medical Reserve Corps have been assigned to active duty at the designated mobilization camps Capt. Clarence B Ingraham, Jr, of Denver, Golden, Colo First Lieut. Albert W Lindberg of Hillsboro, Springfield Ill Capt Hans Hansen of Logan, Fort Des Moines Iowa, First Lieut. Edward S Parker of Ida Grove, Camp Dodge, Iowa, Capt. Herbert Atkins of Pratt Fort Riley Kan, First Lieut. Constant M Colignon of Muskegon, Camp Grayling Mich., First Lieut. Harry B Zimmerman of St Paul Fort Snelling Minn, First Lieut. Robert R Glynn of Springfield, Nevada, Mo, First Lieut. Joseph M Shramek, Omaha, Fort Crook, Neb, First Lieut. Hugo Mella of Bismarck Fort Lincoln, N Dak., First Lieut. Benjamin L Harrison of Cleveland, Camp Perry, Ohio, First Lieut. Lee W Cary of Winnebago, Camp Douglas Wis

First Lieutenants Henry G Turner of Raleigh, N C. Thomas M Chaney of Winston-Salem N C., Nuckols T Davie of West Blockton Ala Charles T Grier of Carthage, N C and Charles W Armstrong of Troy N C., have been assigned to active duty and ordered to report in person to the commanding officer at Fort McPherson Ga Capt Frederick T Harris of Lewiston, Idaho, has also been assigned to active duty and has been ordered to report by telegraph to the commanding general of the Western Department.

See That Your Patients Register

On June 5 every male person in the United States between the ages of 21 and 30 years, both inclusive, who is not an officer or enlisted man in the Regular Army, the Navy the National Guard, or the Naval Militia, in the service of the United States must be registered Ordinarily a person who is to be registered must present himself in person at the registration booth for that purpose. Any one who on account of sickness is unable to do so may cause some suitable person to apply to the county or the city clerk for a copy of the registration card and for authority to fill it out If satisfied that the case is bona fide the clerk will deputize the person applying for the card to make the proper entries on it and to fill out the registrar's report that the card calls for The card is then to be mailed by the sick person or delivered by his agent, to the registrar in the sick person's voting precinct in time to reach there by the day set for registration—June 5 The sick person should enclose with his registration card if he mails it, a self-addressed stamped envelope in order to enable the registrar to send him the registration certificate as evidence of having registered Physicians should bring this matter to the attention of their patients, and cooperate with them in obtaining registration

Offering Service With Provisos

A recent letter from the office of the surgeon-general of the army says that a large number of medical men are offering their services "in case of emergency" and for "their specialty only" It should be made plain that the emergency has already arrived and that the department is in urgent need of every qualified medical officer it can obtain and that men who accept commissions in the Medical Reserve Corps must be ready for active duty of such character as the exigencies of the service may demand, that there will be for all of them a great deal to learn in addition to professional knowledge which they now have, whether they are specialists or general practitioners It should be quite as easy for the specialist to learn his other duties as a medical officer as it will be for the large number of men throughout the country who are accepting line commission without any knowledge at all of the military service If you can through the columns of THE JOURNAL," says the letter, 'explain this matter to the profession at large, it will save this office a very great deal of unnecessary correspondence and may avoid dissatisfaction among those who are tendering only qualified services'

Protecting the Practice of the Absent Physician

THE JOURNAL has received the following inquiry from a Virginia physician

> Will you please send me the outlines of one or more plans that have been adopted or suggested for looking after the practice of those in this city who may enlist in the Medical Reserve Corps? I have the honor of being chairman of a local committee to suggest such a plan to the local society and would like to know what others have done

ANSWER—The following is a list of references on this subject which have appeared in THE JOURNAL

Punishing Patriotism April 14 1917 p 1131
Offers Services to Soldiers Families April 21 1917 p 1190
Resolutions by the Chicago Laryngological and Otological Society April 28 1917 p 1269
Will Conserve Practices of Medical Officers April 28 1917 p 1270
How They Protect the Absent Physician in England April 28 1917 p 1270
Military Surgeons Practice to be Protected May 5 1917 p 1331
The Responsibility of the County Society in Preparedness May 19 1917 p 1484
Conservation of Medical Practice During the War May 19 1917 p 1487
Practice of Physicians in Military Service May 19 1917 p 1487

Medical Students Must Register

To the Editor On page 1415 of the edition of THE JOURNAL of May 12 under the heading Medical Students and Conscription" you state that there will be an exemption of medical students from the selective draft I have a copy of the Emergency Army Bill from the *Army and Navy Journal* and under exemptions I find no such mention What am I to infer from this and what definite enlightenment can I get on this subject? This is a very important question to me and I should like to have you look into it at your convenience, before registration day if possible and advise me I would be very grateful to THE JOURNAL for this information

ANSWER—The above letter is from a physician in Minnesota The question has already been answered in THE JOURNAL No exemption is made in the law for medical students or for prospective medical students Incidentally, neither is any exemption made for civilian physicians under 31 years of age There is no doubt, however, that medical students will be exempted by regulation immediately after registration is completed However, it must be borne in mind that this exemption will take place after registration, in other words, medical students must register

Examinations for the Medical Corps of the Navy

Examinations of candidates for commissions in the regular Medical Corps of the Navy will be held on June 2, at fourteen naval stations in various parts of the United States Approximately 350 candidates have already presented satisfactory credentials and will be admitted to examination

The Bureau of Medicine and Surgery of the Navy Department is in receipt of information in advance of the formal official reports, from some of the examining boards that conducted the examinations of May 11 Of the fourteen candidates examined at Washington, D C, eleven passed, of thirty-one examined at the Great Lakes Station near Chicago, twenty-four passed, of four examined at Charleston, S C, two passed and the one candidate examined at Pensacola, Fla, passed Other examining boards remain to be heard from

Naval Medical School Begins with a New Class

Sixty-six candidates for commissions in the regular Medical Corps of the Navy began a course of study at the Naval Medical School at Washington, D C, May 15, to prepare them for their duties They will be required, however to take the regular examination to be held on June 2, to which all candidates for commissions are to be subjected In the selection of questions and tests to be used in the examination care will be taken to exclude any concerning which a candidate might have at the time of the examination acquired any special knowledge while at the Naval Medical School, so as to put the candidates who have begun training at the school on exactly the same plane as the candidates who have not had the advantage of such training

Bureau of Information of Casualties

The American Red Cross has just established a bureau of information of casualties, under the direction of Prof William E Castle of Harvard University This bureau will relieve the medical and the fighting forces of the burden of correspondence concerning the sick, wounded, killed missing and prisoners, gathering such information as may be obtainable and transmitting in a sympathetic and humane way to the home folks such as can properly be sent, and forwarding to the adjutant-general such as may be of value to him

Training Camps for Medical Reserve Corps

Army training camps for medical officers in the Reserve Corps have been established at Fort Oglethorpe, Ga, near Chattanooga, Tenn, at Fort Riley, Junction City, Kan, and at Fort Benjamin Harrison, Indianapolis Each camp will accommodate 600 officers under instruction Medical officers in the Reserve Corps who are under 45 years of age are to be ordered to these camps for a period of three months' practical training, preparatory to active service

Base Hospitals Reach Port

Lakeside Base Hospital No 4 Cleveland, under the command of Major H L Gilchrist, with Dr George W Crile, director, reached a European port on May 18 The Harvard Medical School Unit, Red Cross Base Hospital No 5, under the command of Major R W Patterson, with Dr Harvey Cushing as director, reached Falmouth, England, on May 22

Examining Boards for Medical Reserve Corps

The following is a list of medical boards as appointed up to May 21 The name and address of the chairman of the board only is given It is presumed that applicants will select the board most accessible to themselves even though this may mean a board in another state

ALABAMA

BIRMINGHAM—Capt John M Lowrey, M R C, 727 1st National Bank Bldg
MOBILE—Capt John O Rush M R C, 412 Van Antwerp Bldg (also O'Gynn and Kilpatrick)
MONTGOMERY—Major J N Barker, M R C

ARIZONA

DOUGLAS—The Surgeon, U S Troops.
FT HUACHUCA—The Surgeon
NACO—The Surgeon, U S Troops

ARKANSAS

HOT SPRINGS—Commanding Officer, Army and Navy General Hospital

CALIFORNIA

CORONADO—Major William L Kneedler, U S A, Retired
LOS ANGELES—Capt John T Kyle M R C, 702 Title Insurance Bldg.
SAN FRANCISCO—Commanding Officer, Letterman Gen Hosp Presidio, San Francisco

COLORADO

DENVER—Capt Cuthbert Powell, M R C, Metropolitan Bldg President.
FT LOGAN—The Surgeon
TRINIDAD—Lieut John R Espey, M R C, Main and Walnut Sts

CONNECTICUT

NEW HAVEN—Lieut John W Churchman, M R C.

DISTRICT OF COLUMBIA

WASHINGTON—Commandant, Army Medical School
WASHINGTON—Major Abram B Hooe M R C, 1220 Sixteenth St, N W President (local only)
WASHINGTON—Major W D Webb M C 1803 Connecticut Ave, N W (Univ of Va) Visits University of Va, Charlottesville every Thursday

FLORIDA

FT BARRANCAS—The Surgeon
JACKSONVILLE—Capt Graham E Henson M R C St James' Bldg
KEY WEST BARRACKS—The Surgeon
TAMPA—Lieut E H McRae, M R C, American Bank Bldg

GEORGIA

AUGUSTA—Major Eugene E Murphy, M R C 452 Telfair St
FT MCPHERSON—The Surgeon
FT OGLETHORPE—The Surgeon
FT SCREVEN—The Surgeon

IDAHO

BOISE—Lieut Col Marshall W Wood, U S A Retired

ILLINOIS

CHICAGO—Major John A Hornsby, M R C, 111 W Washington St President
MT VERNON—Capt William H Gilmore M R C
SPRINGFIELD—Capt George N Kreider, M R C 522 Capitol Ave

INDIANA

FT BENJAMIN HARRISON—The Surgeon
INDIANAPOLIS—Major George M Wells, Retired, M C, 622 Hume Mansur Bldg, President

IOWA

FT DES MOINES—The Surgeon

KANSAS

EAST HUTCHINSON—Lieut Herbert L Scales, 506 Avenue A
FT RILEY—The Surgeon
LEAVENWORTH—Lieut James R Langworthy M R C, Ryan Bldg.

KENTUCKY

ASHLAND—Lieut John W Stephenson, M R C
BOWLING GREEN—Major Arthur T McCormick M R C
LOUISVILLE—Capt Frank T Fort M R C, The Atherton"

LOUISIANA

BATON ROUGE—Capt Charles McVea, M R C
JACKSON BARRACKS—The Surgeon
NEW ORLEANS—Major Isadore Dyer, M R C, 124 Baronne St, President

MAINE

BRUNSWICK—Lieut I N Whittier M R C Bowdoin College.
PORTLAND—Dr William L Cousins 231 Woodford St

MARYLAND

BALTIMORE—Capt John S Davis M R C, 1200 Cathedral St

MASSACHUSETTS

BOSTON—Major Horace D Arnold M R C Harvard Univ Graduate School of Medicine (President)
FT BANKS—The Surgeon
SPRINGFIELD—Lieut Charles F Lynch M R C 387 Main St

MICHIGAN

Albion—Lieut George C Hafford M R C
Ann Arbor—Lieut Reuben Peterson M R C. Univ of Michigan Med School President
Battle Creek—Capt. W H Haughey M R C
Detroit—Major Angus McLean M R. C. David Whitney Bldg
Marquette—Lieut A. W Hornbogen M R C
Sault Ste. Marie—Lieut. E. H Webster, M R C.

MINNESOTA

Ft Snelling—The Surgeon
Minneapolis—Lieut. James F Corbett M R. C 4401 E Lake Harriett Blvd President
Rochester—Major Charles W Mayo Mayo Clinic
Winona—Lieut Hugh McGaughey

MISSISSIPPI

Hattiesburg—Capt. W W Crawford M R C.
Meridian—Lieut. I W Cooper M R C.
Vicksburg—Capt. J S Ewing M R C.
Winona—Major J W Barksdale M R C

MISSOURI

Columbia—Dr Mazyck H Ravenel University of Missouri.
Doniphan—Dr John R Hume
Ft Williams—The Surgeon
Jefferson Barracks—The Surgeon
Kansas City—Major J F Binnie M. R. C Rialto Building
Springfield—Capt. Joseph W Love M R C
St Charles—Dr Frank J Tainter
St Joseph—Dr Daniel Morton
St Louis—Capt. William H Luedde M R. C. 311 Metropolitan Bldg President
Trenton—Dr James R McVay

MONTANA

Ft Missoula—The Surgeon
Helena—Major William C Riddell M R C. 504 Dearborn Ave.

NEBRASKA

Lincoln—Capt. L B Sturdevant, M R. C. 2757 Holdredge St
Omaha—Col John M Banister U S A. Ret 400 Brandeis Theater Bldg

NEVADA

Reno—Lieut. Raymond St. Clair M R C. Nixon Bldg

NEW JERSEY

Atlantic City—Dr Curney Williams 3915 Atlantic Ave
Newark—Capt. David A. Kraker M R C 236 Broad St.

NEW MEXICO

Ft Bayard—The Commanding Officer

NEW YORK

Albany—Major Henry L. M Shaw M R. C 361 State St. President.
Buffalo—Capt. Herbert A Smith M R C 566 Delaware Ave
Plattsburg—The Surgeon
New York—Major Henry C. Coe M R. C. Academy of Medicine 17 W 43d St. President. Office Hours—3 to 5 p m every day except Saturday and Sunday
New York—Dr Simon Flexner 150 E 61st St
Rochester—Major John M Swan M R. C. 457 Park Ave.
Syracuse—Major James I. Mabee M C 309 Orange St.

NORTH CAROLINA

Ft Caswell—The Surgeon
Greensboro—Major John W Long M R. C 119 Church St.

NORTH DAKOTA

Bismarck—Lieut. Albert M Fisher M R C.

OHIO

Cincinnati—Major Robert D Maddox M R C 4 West 7th St President
Cleveland—Capt Harry G Sloan M R. C 1021 Prospect Ave. S E.
Columbus Barracks—The Surgeon

OKLAHOMA

Ft Sill—The Surgeon
Oklahoma City—Lieut Rex G Boland M. R. C 1524 West 29th St.

PENNSYLVANIA

Harrisburg—Capt. Benjamin F Royer M R C. Donaldson Apts
Philadelphia—Lieut. Col Henry Page M. C. Aldine Hotel (special only)
Philadelphia—Major Elijah H Siter M R. C. 1818 S Rittenhouse Square President.
Pittsburgh—Major John W Boyce M R C. Empire Bldg President
Scranton—Lieut. J Mayhew Wainwright 516 Spruce St.

RHODE ISLAND

Newport—Lieut. Charles D Easton, M R. C 36 Ayrault St.
Pawtucket—Capt James L. Wheaton 210 Main St.
Providence—Major John W Keefe 262 Blackstone Bldg

SOUTH CAROLINA

Charleston—Col. A. N Stark M C
Columbia—Lieut. Francis A. Coward M R. C., State Board of Health Laboratory
Ft Moultrie—The Surgeon

SOUTH DAKOTA

Aberdeen—Lieut William E Clark 519 Seventh Ave S E.
Sturgis—Capt J D Brooks M. R C

TENNESSEE

Memphis—Major Frank D Smythe M R C 554 East St.
Nashville—Major Lucius E Burch Eve Building

TEXAS

Austin—Capt. Albert F Beverly 311 W 13th St
Dallas—Capt Edgar W Loomis M R C 236 Page Ave.
Ft Bliss—Commanding Officer Base Hospital
Ft Crockett—The Surgeon
Ft Sam Houston—Commanding Officer Base Hospital.

UTAH

Ft Douglas—The Surgeon

VERMONT

Ft Ethan Allen—The Surgeon

VIRGINIA

Ft Monroe—The Surgeon
Norfolk—Lieut. Burnley Lankford, M R C 530 Shirley Ave.
Richmond—Major Stuart McGuire, M R C, 512 Grace St. East President.
Staunton—Capt Wilbur M Phelps M R C

WASHINGTON

Ft George Wright—The Surgeon
Seattle—Capt. Ira A Brown M R C, 901 Seventh Ave.
Vancouver Barracks—The Surgeon

WEST VIRGINIA

Charleston—Major John E. Cannaday, M R C Capital City Bank.
Wheeling—Lieut William H McClain M R C 83 Twelfth St.

WISCONSIN

Milwaukee—Capt C V I Brown M R C 349 Prospect Ave President.
Sheboygan—Major E J Barrett M R C.

ALASKA

Ft Gibbon—The Surgeon

PORTO RICO

San Juan—Col Basil H Dutcher M R.

Mobilization of Medical Reserve Corps

For the week ending May 19 1917 399 physicians were recommended for commissions in the Medical Reserve Corps Of these 15 were recommended for appointment as majors, 37 as captains and 347 as first lieutenants

New Base Hospital.—The people of Buffalo have pledged a fund of $75 000 to provide a base hospital and the medical men of the city have pledged themselves to furnish $10 000 of this amount

Pharmaceutical Corps Desired—The Philadelphia Drug Exchange has initiated a movement for the establishment of a pharmaceutical corps in the United States Army, and has addressed a letter to the secretary of war asking for its establishment It is pointed out that the enlisting of pharmacists in the line is unjust to these men who have had professional training It is also pointed out that these men might make valuable medical assistants in case of a shortage of physicians

The Russian-Roumanian Medicosurgical Society—A French medical unit is with the Russians and Roumanians in the Jassy region and a medical society has been organized among the physicians there. At its first meeting recently Dehelly described the Carrel method of treating wounds The society has three presidents the Russian, d Osten Sacken, Coulland chief of the French unit and the Roumanian bacteriologist, Cantacuzene All the Roumanian physicians and most of the Russians speak French so the *Bulletin* will be published in French J Clunet was in charge of the French unit at first but succumbed recently to typhus

To Study Social and Economic Problems—In anticipation of the social and economic problems likely to result from the German-American War the National Council of Defense through its Advisory Commission on Labor and Welfare—Mr Samuel Gompers chairman—has appointed Mr Frederick L. Hoffman, statistician of the Prudential Insurance Company of America, chairman of the National Committee on Statistics and Information The plan is to inaugurate at once a national statistical service whereby the state of the nation regarding health, physical and social wellbeing sickness and accidents in industry unemployment, etc., may be presented with scientific conclusiveness from week to week, for the information of the council and the public at large

Nurses of Northwestern Unit Killed—Two nurses connected with base hospital No 12, known as the Northwestern

Base Hospital Unit, which was on its way to France, were killed by an accident, May 20 The *Mongolia,* on which the unit sailed, was about 100 miles east of New York and in accordance with the usual practice the guns were fired to test mounts and ammunition and to drill the navy gun crew on board One of the charges exploded and splinters of the brass case ricocheted and were deflected to the deck of the ship where several nurses were watching the firing Mrs Edith Ayres and Miss Helen Burnett Wood were killed and Miss Emma Matzen was seriously wounded The *Mongolia* returned to New York so that an official investigation of the occurrence might be made

Modern Hospital Train Presented—In presenting to Maryland the most modern hospital train to be found in this country or abroad, the three railroads making the gift the Baltimore and Ohio, the Pennsylvania and the Western Maryland have enabled Maryland to be first in this field The credit for the idea is due to Dr Daniel Z Dunott, chief surgeon of the Western Maryland Railway There are six cars which make up the train Three of these are hospital cars, with forty-two hospital beds, an operating car, which it is claimed is not surpassed in the completeness of its equipment by any operating room in the city, a Pullman and dining car for the personnel of the hospital, and an express car which carries two motor ambulances An overhead trolley by means of which a stretcher may be carried from one car to another is a special feature

Only Commissioned Medical Officers Will Be Called On—Please answer through The Journal the following questions

1 Will the government exhaust the Medical Reserve Corps before it calls on medical men outside of the reserve?

2 Would a man of 50 in the reserve corps be taken before one of 40 or under not in the reserve corps?

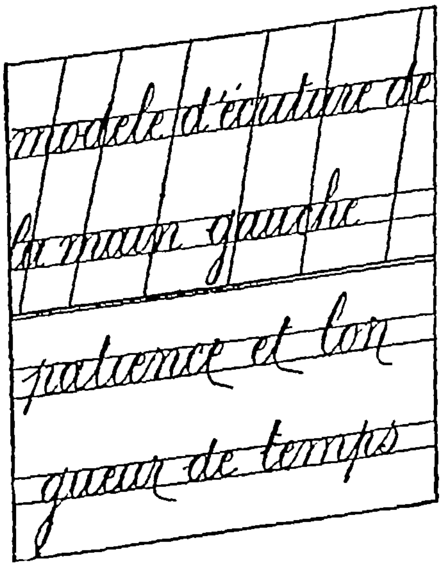
C O Henry Fairmont W Va

Answer—Yes, to both questions

Devices Used in Combating Gases in Trench Warfare—Dr Yandell Henderson, professor of physiology in the Yale Medical School, and J W Paul in charge of the rescue work of the Bureau of Mines, the experts of this bureau, state that the present types of oxygen-rescue apparatus are imperfect and involve grave danger One instance given in the exhaustive report which the bureau has made on this subject is that the apparatus is so constructed that the oxygen supply can be set at a rate sufficient only for moderate exertion on the part of the wearer, hence rapid movement when wearing this mask might mean suffocation at a time when leisurely movement would result in the death of the wearer W E Gibbs, an experienced engineer has produced a new apparatus in accordance with the physiologic lines recommended by this report which experimental tests have shown to be far superior to the older types and which he hopes to so modify as to be serviceable in the European trench warfare

Ambulance Items—There is said to be at present 500 American ambulances on duty on the French fighting fronts ——The board of directors of the Chicago College Club has voted to raise a fund for the purchase of a Red Cross ambulance in the name of the college women of Chicago ——Dr Stephen V Balderston, Evanston, who is connected with the Northwestern University Ambulance Company, has received orders for the enlistment of the organization ——St Mary's Notre Dame College Club has arranged to provide an ambulance, to be known as St Mary's ambulance, for service in France ——At a reception held in New York, May 11, for University of California students who are on their way to France, $45,000 was subscribed for the American Field Ambulance Service ——An ambulance company for service in France is being recruited by the Chicago chapter of the Red Cross ——Dr George Dock, St Louis, has received the French war cross and has been mentioned for his service in moving wounded soldiers under heavy bombardment while engaged in the American Field Ambulance Service.——Members of the Evanston (Ill) Club have subscribed $15,000 for the fund to provide an ambulance for service in France ——Employees of the American Radiator Company, of America, have donated a fully equipped ambulance in memory of Frederick W Monahan, one of the founders of the American Ambulance Corps in France ——Three ambulances have been presented to the Detroit College of Medicine and Surgery, Base Hospital Unit No 36 ——Brooklyn students of University and Bellevue Hospital Medical College are securing subscriptions in Brooklyn for the purchase and equipment of ten ambulances to be sent with the first American contingent to France

Training the Left Hand in Writing—Dr C. W Hutt has described in the *Lancet* (April 7, 1917, p 553) the work of M Tamenne, a Belgian refugee, at the Professional School for the Wounded at Montpellier, in teaching maimed soldiers to write with the left hand Tamenne, who is a one-armed man, places considerable emphasis on learning to write in a hand resembling as closely as possible the former handwriting, which, he says, contributes in a large degree to make the maimed person think of himself as not handicapped in any way The writing taught has the same slope as ordinary writing, not even upright writing is allowed The position of the body is the same as in writing with the right hand The following rules are given 1 Place the forearm comfortably on the table so as to fatigue the hand as little as possible 2 Practice writing between lines about 3 5 mm apart 3 Place the paper in a sloping position as shown in the accompanying illustration 4 Try from the beginning to give the letters the usual slope. This may be facilitated by drawing faint oblique lines as shown in the illustration and making the up and down strokes of the letters parallel with these oblique lines 5 Always be sure that the hand is immediately below the point of writing The last two rules will be found difficult and will tire the hand Rest should be taken for a few minutes and the practice then resumed After nine or ten lessons of an hour and a half it is said the difficulty will be overcome and the letters will be formed easily and the movements become more precise After acquiring some skill the writing should be done between lines 2 5 mm apart, and later on a single line Do not try to rush the matter by practicing too long at a time or by making the letters carelessly Time will be lost in this way Considerable skill should be acquired in two months



Care of Physicians' Practice—At the meeting of the Kings County New York Medical Society in Brooklyn, May 15 resolutions were adopted favoring the dividing of fees for the benefit of physicians who are called to the colors It is proposed that the physician attending the case shall receive 50 per cent and the remainder of the fee shall be turned over to the family or dependents of the physician at the front ——The Lyon-Lincoln Counties (Minnesota) Medical Society, at a recent meeting, adopted resolutions that dependent members of families of all who enlist (but not conscripts) and who hold rank below that of lieutenant, will be attended by members of the society when necessary free of charge, and that they would attend patients of physicians who enlist and on their return would give over to them the fees collected on the accounts held against their patients, and will furthermore endeavor to return such practice to the physician intact ——The Michigan State Medical Society, at its annual meeting, voted unanimously to take care of all dependents of physicians who go to the front and to conserve their practice ——Sixty members of the Rogers Park (Ill) Physicians' Club, May 13, volunteered to take care of the practice of all physicians in Rogers Park who enter military service and to turn over 50 per cent of the fees received to the family of the physician ——At a meeting of St Louis physicians May 12 an agreement was made whereby physicians of St. Louis who are exempt from military service will take over the practice of physicians at the front and divide fees with them ——The Physicians' Club of Oak Park has passed resolutions to care for the patients of all physicians called to the colors, and to give 50 per cent of all fees received from such patients to the families of the absent physician and to return these patients to the physician on his return from military service ——The Washington County (R I) Medical Society has adopted a resolution that should any member of the society leave his practice for war service the members of the society remaining at home will carry on his practice and pay his family 50 per cent of the proceeds

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION, PUBLIC HEALTH, ETC)

DISTRICT OF COLUMBIA

Ambulance Company Organized at Washington, D C—The Washington Ambulance Company, with Dr Ryan Devereux, Medical Department, U S Army, as captain, will go into training at Allentown Pa May 24 Equipment is being provided by public subscription One hundred and fifteen persons have pledged themselves to service in this corps, and sixty-three have already been sworn in Members of the corps are looking forward to service in France as soon as the company has had the necessary training.

GEORGIA

New Hospital for Fort McPherson—Congress has appropriated $90,000 for the erection of a new hospital at Fort McPherson, near Atlanta

Personal—Dr and Mrs Elijah S Peacock, Harrison, celebrated the twenty-fifth anniversary of their wedding, April 18——Dr William H Goodrich has been elected chairman of the Board of Control of the University Hospital, Augusta

Salvarsan Resolutions—At a recent meeting of the Georgia Medical Society of Chatham County Savannah, resolutions were adopted setting forth the vital importance of salvarsan the uncertainty and difficulty of obtaining the drug on account of its being protected by patent rights and the fact of its manufacture abroad, and urging Congress to abolish the patents on this drug and its closely related products

ILLINOIS

Chicago

Results of Cook County Intern Examinations—The results of the competitive examinations for internship in the Cook County Hospital recently announced place 68 men on the eligible list. Of this number, 41 are graduates of Rush Medical College 13 graduates of the University of Illinois College of Medicine and Surgery, 9 graduates of Northwestern University and 5 of the Chicago College of Medicine and Surgery

The Retreat from Mons—Col Thomas H J C Goodwin, R A M C, C M G, D S O, the medical member of the British Commission visited Chicago May 22, was entertained at luncheon at the Union League Club, and in the afternoon attended the initial meeting of the State Committee for National Defense and there detailed the needs of the Allies for surgeons and nurses and expressed his appreciation of the prompt response to this appeal He was the guest of honor of the Medical Reserve Corps, U S Army, Illinois Division, at a dinner at the La Salle in the evening, and after dinner gave a very simple and plain but effective and thrilling account of his personal experiences as officer in command of a field ambulance during the advance of the Germans toward Paris, which necessitated the retirement of the British troops for a time. He paid an eloquent tribute to the loyalty self-sacrifice and devotion of the officers and men of the sanitary troops hundreds of whom had laid down their lives in the endeavor to evacuate the wounded from the front and to alleviate their sufferings At the conclusion of Colonel Goodwin s address, an informal reception was held

IOWA

Hospital News—A site has been purchased for the Tuberculosis Sanitarium for Dubuque County The tract of land is 26 acres in extent located between Fifth and Seventh avenues and near Eagle Point.——The Sisters of St. Francis have purchased the Le Mars Hospital and will rebuild it at a cost of $85 000

Personal.—Dr John C. Murphy, Davenport, has been commissioned lieutenant, M C, Iowa N G and assigned to duty with the Field Artillery——Dr Frank T Launder Garwin has been elected a member of the state board of health succeeding Dr Henry A. Dittmer, Manchester term expired——Dr Frank O Burk Davenport has succeeded Dr Emil A Ficke as physician of Scott County——Dr Charles R Jones, Atlantic, is reported to be seriously ill with duodenal ulcer

State Medical Women Elect—The State Society of Iowa Medical Women held its twentieth annual meeting at Des Moines, April 8 under the presidency of Dr Lily Kinnier, Dubuque, and the following officers were elected president, Dr Laura House Branson, Iowa City, vice presidents, Drs Jennette F Throckmorton, Chariton, Josephine M W Rust, Grinnell, and Rosabell A Butterfield Indianola, secretary, Dr Ida G Rhoades, Cedar Falls (reelected), and treasurer, Dr Nelle Noble, Des Moines

New State Officers—The sixty-sixth annual meeting of the Iowa State Medical Society was held at Des Moines May 9-11, under the presidency of Dr John F Herrick Ottumwa Fort Dodge was selected as the place of meeting for 1918 and the following officers were elected president, Dr John N Warren, Sioux City, president-elect, Dr Max E Witte, Clarinda, vice presidents, Drs Michael J Kenefick, Algona, and Elias B Howell, Ottumwa, editor of the journal Dr David S Fairchild, Clinton (reelected), treasurer, Dr Thomas F Duhigg, Des Moines (reelected), secretary, Dr Tom B Throckmorton, Des Moines and delegates to American Medical Association, Drs William B Small, Waterloo, Lawrence W Littig Davenport, and Mathew N Voldeng Woodward

MARYLAND

Baltimore

Allied Bazaar Fund Completed—The final accounting of the Allied Bazaar at Baltimore shows receipts of $85,500 collected as follows

Baltimore fund for relief of disabled soldiers and sailors and their families	$21 000
Great Britain and Ireland	12 500
Belgium	12 500
France	12 500
Italy	10 000
Roumania Servia Poland Lithuania and Armenia	17 000

More Hospitals for Tuberculosis—A committee composed of Drs Henry Barton Jacobs, C Hampson Jones and J Hall Pleasants, and Mr H Wirt Steele representing the Maryland Tuberculosis Association, has sent a letter to Governor Harrington and the Maryland Preparedness and Survey Commission in which it is urged that the legislature at the special session provide for doubling hospital accommodations for tuberculosis patients, and also for more hospitals to be erected and equipped to meet the increasing number of cases of the disease expected as a result of the war It is also recommended that all the state tuberculosis institutions be correlated, coordinated and controlled under a state tuberculosis commission to be established by the general assembly

Personal—Dr Hugh Hampton Young director of the James Buchanan Brady Institute, the Johns Hopkins Hospital has received notification of his appointment as major in the Medical Reserve Corps and will leave shortly for England With Dr Young will go Dr Louis C Lehr, professor of urology at Georgetown University, and Dr Montague L. Boyd, professor of urology at Emory University, Atlanta Ga who will have the rank of captains, and Dr Howard L. Cecil of the Brady Urological Institute, who has been commissioned as first lieutenant——Dr David M Davis head of the research laboratory of the Brady Urological Institute has sailed for France——Drs Sydney M Cone and Lewis C Spencer Baltimore will go with the Harvard Orthopedic Unit to France

Meeting for Medical Preparedness—At a special meeting held in Osler Hall Baltimore May 17 in the interest of medical preparedness the principal speakers were Col Thomas H Goodwin service medical officer with the British Commission Major Robert E Noble of the surgeon-general s staff Surg-Gen William C Gorgas U S Army, and Dr H Young chairman of the Maryland Committee on Medical Preparedness Colonel Goodwin gave a graphic description of the retreat from Mons and the battle at the Marne Major Noble in his address said that only 4,223 medical men had been recommended for commissions in the Officers Reserve Corps while the army would need 20,000 General Gorgas stated that the first problem confronting us is to take care of the 1,000 000 men in the army from a sanitary and medical viewpoint There must be the preliminary examination to determine the physical fitness of the recruit We shall need 10 000 physicians for this duty and we shall need 6 000 men in the medical and ambulance service in France '

Mental Clinic for Maryland Offered.—Members of the Maryland Psychiatric Society have offered Adjutant-General

Warfield and the War Department their services, with two specific plans First, that a mental clinic be established at the proposed concentration camp at Havre de Grace, and second, that receiving and convalescent stations be established for American soldiers, who may suffer from mental or nervous disorders as a result of the war The Psychopathic Ward at the Spring Grove State Hospital has been offered as a receiving station, and a convalescent station at the Springfield State Hospital has been suggested This latter station would be temporary, consisting of wooden buildings on the grounds of the hospital, while for the receiving station the new building at the hospital, which has just been completed and for which equipment will be asked of the extra session of the legislature, will be used The cost of equipping both stations will be about $80,000 If the stations are authorized, probably vocational schools for the wounded also will be established, like those in France Volunteer teachers will instruct the crippled and those whose minds are affected in trades by which they can make a living The mental clinic would take care of all mental trouble at the concentration camp Physicians would visit the camp on stated days and examine any soldier whose nerves had been overstrained and arrange for the care of more serious cases The committees appointed are Medical Drs Arthur Herring, Baltimore chairman, J Clement Clark, Sykesville, J Percy Wade, Catonville, Robert P Winterode, Crownsville, William R Dunton, Jr, Townson, Andrew C Gillis, Baltimore, Henry I Berkley, Baltimore, and Frank W Keating, Owings Mills Advisory Daniel Randall, Senator Wade Warfield Harry J Hopkins, W Champlin Robinson, William J Ogden and Drs Edward N Brush and Charles G Hill

MASSACHUSETTS

New Surgeon-General—The governor has announced the appointment of Dr William A Brooks, Boston, as chief surgeon of the National Guard, with the rank of lieutenant-colonel

Pharmacy College Cornerstone Laid—In connection with the commencement and class day exercises of the Massachusetts College of Pharmacy the cornerstone of the new building for the institution was laid with appropriate exercises, May 22

Personal—Dr Leverett D Bristol, Boston, has been appointed state health officer of Nebraska under the new Fox law——Dr Benjamin F Andrews has been placed in charge of the surgical outpatient service of the Worcester State Hospital Dr Allan J McLaughlin, Boston, has been appointed to succeed Dr Richard P Strong Boston, as chairman to the subcommittee on hygiene, medicine and sanitation of the Massachusetts Committee for Public Safety——Dr William T Councilman, Boston, has returned after an absence of several months——Dr Frank T Lougee has been appointed city physician of Lynn, succeeding Dr Joseph F O'Shea, deceased

New District Officers—Worcester District Medical Society, at Springfield, May 9 president, Dr Michael F Fallon, secretary, Dr Ernest L Hunt——Franklin District Medical Society, at Greenfield, May 8 president, Dr Harry N Howe, secretary-treasurer, Dr Frank A Millett, both of Greenfield——Essex North District Medical Society, at Lawrence, May 2 president, Dr Thomas R Healy, Newburyport, secretary, Dr J Forrest Burnham, Lawrence——Suffolk District Medical Society, at Boston, April 25 president, Dr Herman F Vickery, secretary, Dr George G Smith——Hampden District Medical Society, at Springfield, April 24 president, Dr John M Birnie, secretary, Dr Hervey L Smith, both of Springfield

MINNESOTA

Sanatorium Notes—The tuberculosis sanatorium, which has been under construction at Granite Falls for the last two years, was formally opened to receive patients, April 29 The institution is the sanatorium for Yellow Medicine, Chippewa, Lac qui Parle and Renville counties, has been erected at a cost of $90,000, and has accommodations for forty patients——Dr Merton Field St Peter, has purchased the Miles B Johnson residence, which will be converted into a hospital and sanatorium

Personal—Dr George B Weiser, New Ulm, was knocked down and run over by an automobile May 3, sustaining painful injuries——Dr Charles A Lester, Winona, fell in a gymnasium, April 26, fracturing his patella——Dr Walter H Darling, Minneapolis, has returned after nearly a year of service on the western front——Dr John P Rosenwald, Minneapolis, has been commissioned first lieutenant, M C, Minn N G, and assigned to duty with the First Field Artillery——Dr Edward H Trowbridge has resigned as assistant superintendent of the Minnesota School for the Feebleminded, Faribault.

Medical Board Changes—Dr Charles L. Schofield, Benson, has been appointed a member of the state board of health, to succeed Dr Winslow C. Chambers, Blue Earth——Dr Edward T Sanderson, Minnesota, has been appointed a member of the state advisory commission for tuberculosis——Dr Egil Boeckmann, St Paul, and Dr Christopher Graham, Rochester, have been reappointed members of the state board of health——Dr George B Weiser, New Ulm has been appointed a member of the State Board of Medical Examiners, to succeed Dr Frank R Weiser, Windom——Dr Arthur M Eastman, Minneapolis, has been appointed a member of the board, to succeed Dr Robert D Matchan, Minneapolis, and Dr Ida A. MacKeen, Minneapolis, has been appointed a member, to succeed Dr Annah Hurd, Minneapolis

Special Fellowships—Fellowships in ophthalmology and otolaryngology in connection with the University of Minnesota have been established by Dr Frank C Todd of Minneapolis and Dr Frank E Burch of St. Paul, both of the School of Medicine These fellowships carry with them the same stipend that is paid by the University of Minnesota to the university fellows, namely, $500 the first year, $750 the second year and $1,000 the third year Such fellows will spend half their time in the private clinic of Dr Todd or Dr Burch, and the other half in laboratory and clinical work and in pursuit of certain courses for specialists in ophthalmology and otolaryngology at the university For work done in these private clinics, credit will be given toward the degree granted by the university in the course of ophthalmology and otolaryngology given at the University of Minnesota, to accepted doctors of medicine covering a period of three years which prepares the physician for the specialty of ophthalmology and otolaryngology Applications for these fellowships may be made to the chief of the department, Dr Frank C Todd, Minneapolis

MISSISSIPPI

Hospital Notes—The Matty Hersee Charity Hospital Meridian, which was closed, March 6, on account of lack of funds, was reopened April 1, as the result of public subscription The state appropriation of $11,000 for the institution is still unavailable——Work on the South Mississippi Charity Hospital, Laurel, has been started and it is expected that the institution will be ready for occupancy in September The hospital site is at Lakeview, on a hill overlooking the lake near the Marathon Mill

Personal.—Major John H Allen, M C, Nashville, Tenn., has been assigned to duty as officer in charge of sanitation and to make arrangements for necessary hospital facilities at the camp at Vicksburg, Miss He will go to that city for a conference with Lieut-Col Willard D Newbill, Quartermaster Corps, in regard to the sanitation of the camp for the national memorial celebration and peace jubilee to be held there He will be on duty at Vicksburg until the close of the camp——Dr Kutcher T Klein, for several years superintendent of the Matty Hersee Charity Hospital, Meridian resigned, May 1, and Dr Thomas D Bourdeaux was elected his successor——Dr John L Trice, Tupelo, has been appointed surgeon in charge of the Natchez Hospital and Dr Clarence E Mullens, Slingerlands, N Y, assistant surgeon

NEW YORK

Personal—Dr Henry T Williams has resigned as president and director of the Rochester Public Health Association——Dr Howard Lull Van Winkle, Kingston, has been appointed bacteriologist of Ulster County at a salary of $2,000

Money Raised for Hospital—At a meeting of the Williamsburgh Hospital Campaign Committee, held April 30, it was reported that $189,703, of the $200,000 required for the institution had been received in the first sixteen days of the campaign

Marriage Bill Becomes Law—Governor Whitman has signed the Whitney bill which requires that those who apply for marriage licenses in New York State shall present affidavits that they are free from communicable diseases The affidavits filed must contain sworn statements that the affiant has never had venereal disease, or that laboratory tests show that such diseases are not now present

Sale of Skimmed Milk Legalized—The Wicks bill, which provides that the prohibition contained in the law regulating the sale of adulterated milk shall not apply to skimmed milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming, if it is sold for and as skimmed milk, has been passed by the legislature This bill also stipulates that prohibitions against the sale of cheese made from adulterated milk or cream shall not apply to pure skim-cheese made from milk which is otherwise clean and pure except by skimming This act is to take effect immediately

Civil Service Examinations—The State Civil Service Commission announces that on June 23, open competitive examinations will be held throughout the state for the following positions

Assistant Medical Examiners of Schools, education department, salary $3 000 open to men only

Assistant in Pathology, State Institution for the Study of Malignant Disease Buffalo salary $1 800 applicants must be under 28 years of age and graduates of Class A medical schools or foreign universities of equal standing

Bacteriologist Pathologist state department of health, open to men and women salary $2,500 degree in medicine or an equal education desirable

Physician State Institution for Feeble Minded Children, Syracuse salary $1 800 open to men and women under 30 years of age.

Applications for these positions will be received at the office of the State Civil Service Commission, Albany, not later than June 13

New York City

St. Luke's Hospital Ready for Home Defense Service—Rev Dr George F Clover, superintendent of St Luke s Hospital announces that the Norris Pavilion of the hospital will be opened for service, May 21 for the treatment of minor defects of men who have applied for enlistment and have been rejected Thirty beds in the pavilion are ready for occupancy

Sue Milk Company for Typhoid Epidemic—Residents of South Brooklyn and Bay Ridge have begun sixteen lawsuits asking for a total of $306 000 damages from the Ideal Dairy Company, Brooklyn It is alleged that the milk supplied by this company was the cause of a number of cases of typhoid fever and several deaths in 1915 It is stated that the charges will be vigorously denied, as the cause of the epidemic has never been officially established

Venereal Disease.—The New York State Department of Health devoted the entire May issue of *Health News* to the discussion of venereal disease, giving authoritative information as to the extent of these diseases and the methods by which they are being combated The attitude is wholly from the standpoint of health, and did not consider the moral factors involved, but left this part of the subject to other agencies

Oral Hygiene Week—The *Bulletin of the Bureau of Public Health,* May 11 dealt with Oral Hygiene Week May 15 150 dentists members of the first and second district dental societies visited the public schools and gave short talks to the children on the importance of proper care of the teeth, and on the next day, compositions written by the children, on the subject of the talk given them by the dentists, were read in the schools

Conference of Charities and Correction—The eighth New York City Conference of Charities and Correction was held in Brooklyn Manhattan and Dobbs Ferry May 22-24 under the presidency of Mr Leopold Plaut, New York. The sections under which the conference worked were Families, Public Health Publicity and Administrative Methods, Recreation and Delinquency, and Children Dr S Adolphus Knopf, chairman of the Public Health Committee, made a report before the Public Health Section, and papers were read on Constructive Suggestions Toward the Control of the Most Important Infectious Diseases," Dr S Josephine Baker, considering the subject from the viewpoint of child life, and Dr Ira S Wile from that of adult life

Personal—Dr I Seth Hirsch has resigned as director of the Roentgen-ray department of the Post-Graduate Hospital and Medical School to accept a similar position in Bellevue and Allied hospitals——Dr Martha J Peebles, Brooklyn, while cleaning a revolver at her summer home near Stroudsburg, Pa, accidentally shot herself, and is under treatment at the Monroe County Hospital, Stroudsburg——Dr Linsyl R. Williams has succeeded Dr John S Billings as deputy health commissioner of New York City——Dr Henry H M Lyle, who recently returned after two years' service on the western front read a paper on 'The Base Hospital in France" before the Wayne County Medical Society Detroit, April 23——Capt John A Quell, Brooklyn, has resigned from the Medical Corps of the First Cavalry, to become a passed assistant surgeon in the navy

NORTH CAROLINA

Auxiliary Medical Defense Committee—The following is the Auxiliary Medical Defense Committee of Wake County, N C Drs Augustus W Knox, chairman, Hubert A Royster, Robert P Noble, James W McGee Louis N West, Albert S Root Henry G Turner, James H Payne, U S Navy Recruiting Station, Watson S Rankin, Raleigh, James M Templeton, Cary, Charles B Wilkerson, Apex John L Moore, Wendell, William T Carstarphan, Wake Forest.

NORTH DAKOTA

Personal—Dr John W Cox of the state public health laboratories, Grand Forks, has returned to the university after having been a month in the United States Public Health Service, in Okmulgee County, Okla ——Dr Charles J McGurren, Devils Lake, was appointed state superintendent of public health and secretary of the state board of health

New State Officers—The thirteenth annual meeting of the North Dakota Medical Association was held in New Rockford, May 9-10, under the presidency of Dr Victor J La Rose, Bismarck Fargo was selected as the place of meeting for 1918, and the following officers were elected president, Dr George M Williamson, Grand Forks, vice presidents, Drs Edgar A Pray, Valley City, William P Baldwin Casselton, and Fred E Ewing, Kenmare, secretary, Dr Hezekiah J Rowe, Casselton (reelected), treasurer, Dr William F Sihler, Devils Lake, delegate to the American Medical Association, Dr Charles MacLachlan, New Rockford, alternate Dr James P Aylen Fargo, and councilors, Drs Paul Sorkness Fargo, John E Countryman, Grafton, Francis R Smyth Bismarck The association recommended for members of the state medical examiners board, Drs Joseph C Suter, Grafton, Albert W Skelsey, Fargo and Archibald D McCannel, Minot, and for member of the Medical Defense Board, Dr Andrew Carr, Minot

PENNSYLVANIA

No Change in Requirements—A resolution recently passed by the Pennsylvania Bureau of Medical Education and Licensure states that inasmuch as the Council of National Defense has announced that no changes in the usual procedure of medical schools are made necessary to supply physicians in the present national emergency, the bureau declines to make any modification in the requirements in medical education as demanded by the laws of Pennsylvania

Personal—Dr William W Keen, emeritus professor of surgery in Jefferson Medical College, and president of the American Philosophical Society, fell, May 17, severely injuring his right shoulder——Dr De Forrest P Willard of Lansdowne has joined the Orthopedic Unit of the United States Army and will be commissioned a captain——Dr Harold L Amoss and Dr Royal S Haynes of New York read papers before the joint meeting of the Philadelphia County Medical and the Philadelphia Pediatric Societies on May 23 on The Mechanism of Defense and Serum Treatment of Poliomyelitis" and 'The Early Recognition of Acute Anterior Poliomyelitis and its Importance in Respect to Treatment,' respectively

RHODE ISLAND

Personal.—Dr Arthur W Stevenson Newport, has returned from Europe, where he served in military hospitals on the war front

New Officers—At the annual meeting of the Pawtucket Medical Association, Dr Charles H Holt was elected president Dr Ardashes H Merdinyan, vice president, Dr Earl J Mathewson secretary-treasurer, and Dr Stephen F Hughes, treasurer

SOUTH CAROLINA

Personal.—Dr William C Sandy Jr., medical director of the State Hospital for the Insane Columbia, has resigned to accept the appointment of the assistant superintendent of the State Hospital for the Insane, Middletown, Conn

District Association Meet.—The Third District Medical Association held its annual meeting at McCormick April 11 and elected Dr Rallie M. Fuller, McCormick, president, Dr Jesse H Teague Laurens, vice president, and Dr James S Fouche, Ninety-Six, secretary-treasurer Laurens was selected as the next place of meeting

WISCONSIN

Surgical Association Elects Officers—At the annual meeting of the Wisconsin Surgical Association, held in Milwaukee, May 9, Dr Horace M Brown, Milwaukee, was elected president, Dr John F Pember, Janesville, vice president, and Dr Daniel Hopkinson, Milwaukee, secretary-treasurer (reelected)

Personal—Dr Othoa Fielder, Sheboygan, a member of the state board of health, was operated on recently for appendicitis, and is said to be doing well——Dr Erwin C Cary, Reedsville, who has been ill with pneumonia in the Holy Family Hospital, Manitowoc, is convalescent and will soon return home

Hospital Items—At a meeting of physicians in the office of the Health Department of Milwaukee, April 30 it was recommended that a new and centrally located emergency hospital be established with a capacity of five hundred beds, to replace the present emergency hospital——The directors of the Dodgeville General Hospital have closed negotiations for the purchase of the residence of Mrs D H Williams, which, after remodeling, will be opened as a sanatorium

CANADA

University News—Queen's University, Kingston, Ont, is holding a special course commencing May 15, for a number of medical students who went overseas with the Queen's Base Hospital

Hospital News—The Galt (Ont) General Hospital is providing for a children's ward——The medical men of Winnipeg, Man, have made an offer of a base hospital for service in France——A new isolation hospital is to be built at Saskatoon, Sask——The building of a new sanatorium at Fort Qu'Appelle, Sask, has been commenced The work on this institution was suspended at the outbreak of war

Typhoid Fever—There is an outbreak of typhoid fever at Orillia, Ont, due, it is said to failure of that town to pasteurize its milk supply——Typhoid fever has been prevalent in parts of the province of Quebec A number of cases have occurred in Montreal Sherbrooke, Lachine, St Johns Farnham, St Hyacinthe, Sorel, and Levis——The situation as regards typhoid fever in Edmonton Alta, has been encouraging during the past year There were only eight cases contracted in that city during the past year, and only one death

Banquet to Major Mayrand—Major R Mayrand, professor of electrotherapy at Laval University, Quebec, was tendered a banquet on his recent return to Quebec from the seat of war He served at the Valcartier camp and sailed with the first Canadian unit the only representative of the French Canadians in this first hospital corps which served first at Hampstead, then at Boulogne in France and later was stationed at Lemnos where the equipment for 400 patients was swamped with 800 patients suffering from dysentery and nearly the whole of the personnel were affected also The hospital was then sent to Alexandria and Saloniki, where malaria took the place of dysentery Then the hospital was recalled and will probably be sent to France next where Major Mayrand expects to rejoin it The banquet was tendered by the medical service of the Hotel Dieu, to which he is attached, and by the Laval University

Public Health—Dr John W McIntosh, Vancouver B C, speaking in the British Columbia legislature, referred to the unsatisfactory way in which problems connected with public health were dealt with in the province of British Columbia In the city of Vancouver the death rate from tuberculosis, instead of decreasing, has increased by 43 per cent during the period elapsing between the years 1904 and 1914, and in Victoria during the same period it has increased by 58 5 per cent In Vancouver 15 per cent of all deaths are due to tuberculosis Dr McIntosh contrasted these figures with those of the province of Ontario where the death rate from this disease has diminished by as much as 40 per cent He objected to the treating of advanced and incipient cases side by side in the same hospital, and thought that incipient cases only should be treated in the institution at Tranquille As much had been done in recent years by the employment of the tuberculin test in cattle, he considered that within the next three or four years the cattle in British Columbia would be free from tuberculosis

Personal—Lieut-Col George R Philip, Toronto, after being in France thirty months has been recalled for important duty which is to be assigned him——The report published that Lieut-Col George E Armstrong, Montreal had relinquished his temporary commission in the Canadian Army Medical Corps is now stated to be incorrect Dr Armstrong is remaining in England——Dr Walter Connell, professor of pathology, bacteriology and sanitary science in Queen's University, Kingston, Ont, has been appointed to the command of the new Queen's Military Hospital at Kingston——Lieut Ray V McCarley, M D, Vancouver, B C, has left for England to join the Royal Army Medical Corps——Dr Hyman Lightsone, R A M C, Montreal, has been awarded the medal of honor by the French government in recognition of services rendered in combating an epidemic of typhoid fever in the district of Querrien, Point Noyelles——Capt W Norman Gilmour, M C, R A M C, Brockville, Ont., medical officer of the 16th Royal Scots, is in hospital at Boulogne, France, with a fractured right humerus——Stewart S Skinner, M B, has resigned as registrar of the College of Physicians and Surgeons of New Brunswick and is leaving for overseas Dr John S Bentley, St John, has been appointed to succeed him

GENERAL

Prophylaxis of Cancer in Porto Rico—A propaganda committee has been appointed in Porto Rico, affiliated with the Cancer Commission of the United States, to educate the public in the prophylaxis of malignant disease The committee includes six physicians with Dr J G Brioso as chairman

No Separate Health Department for Brooklyn—A bill providing for a reconstruction of the city health department whereby Brooklyn would have an independent health department has been vetoed by Mayor Mitchell, who holds that instead of improving health administration, it would tend to make it less efficient than it is now, and would add a considerable burden to the taxpayer

Union Endorses Industrial Hygiene Work—The Amalgamated Lithographers of America recently adopted resolutions which have been sent to the mayor in which they express appreciation of the importance of the work of the Division of Industrial Hygiene and assure the department of health that the Division of Industrial Hygiene will have the support and cooperation of this union

Georgia Railway Surgeons Meet—The annual meeting of the Central of Georgia Railway Surgeons Association, held in Macon May 3, the following officers were elected president, Dr Louis E Broughton, Andalusia, Ala, vice presidents Drs Alfonso J Mooney, Statesboro, Ga, and Agnew H Hilsman, Albany, Ga, and secretary-treasurer, Dr Walter E Saunders, Arlington, Ga

Smallpox—During the five weeks ended April 27, 1917 according to *Public Health Reports,* May 11, 1917, there were reported from seventy cities of the United States 1,157 cases of smallpox The high points of the disease were reached in Minneapolis, where there were 154 cases, and in Austin, Tex where there were 76 The disease was mild everywhere except in Austin, where it is said the virulent type was present

Dental Hygienists—Next month ninety-six young women will be graduated from the Columbia University School of Oral Hygiene This will be the first class of this kind graduated Through these "dental hygienists" the department of health will inaugurate a new method of looking after the teeth of schoolchildren The graduates in dental hygiene have been taught how to examine teeth and to clean them with instruments, and as soon as they are graduated will enter on this work in the schools

The Teeth of Schoolchildren—Oral Hygiene Week has brought out statistics with reference to the teeth of schoolchildren Last year in its supervision of the health of schoolchildren the Bureau of Child Hygiene, which employs 117 physicians, 235 nurses and nine dentists, examined the teeth of 275,000 children and found that 166,000 children had bad teeth The department of health now maintains eight special dental clinics in schools in various parts of the city Since these clinics started in January, 1913, they have treated approximately 45,000 children Altogether 65,000 teeth have been extracted and 20,000 filled The department of health feels that the facilities for the care of the teeth of New York children are developing satisfactorily

Food Expert Brinkler Seeks Abrogation of Fraud Order—George H Brinkler, who has posed nationally for some years past as a food expert and dietist, has petitioned the supreme court of the District of Columbia to compel the postmaster general to abrogate a fraud order issued Aug. 19, 1914, barring Brinkler from the use of the mails. Brinkler was tried before a jury in Washington, D. C., in January last, on a charge of using the mails to obtain money under false pretenses, and was acquitted, but the postmaster general has allowed the fraud order to remain in force. To a request from Brinkler for the abrogation of this order the postmaster general replied that he found that the order had been properly issued and that its revocation for the purpose of permitting the resumption of a business found by the postoffice department to be fraudulent was not warranted.

FOREIGN

Deaths in the Profession Abroad.—**H. R. Jones** of Liverpool, aged 53, noted for his important work in training medical men for the diploma of public health, as well as for statistical and pathologic research.——**C. P. M. Boeck,** until recently professor of dermatology at the University of Christiania, aged 71. He founded in 1880 the journal now known as the *Tidsskrift for den norske Lægeforening*.——**V. Delsaux,** professor of otology at the University of Brussels, founder and editor of the *Presse Oto-rhino-laryngologique*.——**F. Labadie-Lagrave,** a well-known gynecologist and obstetrician of Paris, aged 73.——**P. Cruet,** pathologist and prosector at the University of Paris, aged 34.——**Gairal,** mayor of the town of Carignan, vice president of the Association genérale des medecins de France and president of the Union des syndicats medicaux. His medical diploma dates from 1872.——**G. Jäger,** formerly professor of hygiene at Stuttgart, aged 84. His name is familiar on account of his invention of the clothing material that bears his name.

Death of Presiding Officer of Nobel Medical Prize Committee.—K. A. H. Mörner, professor of chemistry and pharmacy at the Karolinska Medico-Chirurgical Institute of Stockholm, died recently, aged 62. Since 1892 he has been rector of the institute, in which position he participated in drawing up the regulations for the prizes of the Nobel Prize committees and since has been president of the Nobel Medical Committee. Count Mörner spoke several foreign languages well, and his addresses on the prize winners, their work and achievements, at the ceremonies of conferring the Nobel Prize in medicine, are said to have been a conspicuous feature of the Nobel presentation ceremonies, much appreciated by the Swedish lay public as well as by the profession. He spoke to Golgi in Italian, in awarding him the Nobel Prize to Ramon y Cajal in Spanish, and to Pawlow in Russian as well as in English to Ross and Carrel, and in French and German to the other recipients making a short address in the recipient's own language as he presented him with the prize. Mörner's research and publications in the line of chemistry, especially physiologic chemistry, toxicology and chemical analysis, were notable. A work of his on physiologic albumin in the urine was awarded the Alvarenga Prize in 1895.

LONDON LETTER

London, April 28, 1917

Vital Statistics for the Year 1915

The annual report of the registrar-general for 1915 has just been issued. As that was the first complete year of the war, the figures are unusually interesting. They are remarkable for the number of previous records which are broken. The marriage rate was the highest on record. The birth rate was the lowest. The death rate from typhoid fever was the lowest on record, that from influenza the highest since 1900 and that from measles the highest since 1896. Again, the age rates of spinsters marrying bachelors and of bachelors marrying spinsters were both the highest on record. Finally, the increase of boy babies over girls from July, 1915, to June, 1916 was the highest on record for fifty years. This seems to bear out the superstition that war causes a relative increase in the male as compared with the female birth rate. The idea of course, is that Nature tries to compensate for the loss of male life in battle. The marriage rate was 19.5 per thousand, being 3.6 above the rate for 1914. The provisional figures for 1916, however, indicate that the marriage "boom" is passing. The birth rate was 22 per thousand, which is 3.5 below the average for the preceding ten years and 1.8 below the rate for 1914. *But this* rate compares favorably with that of other belligerent nations. The provisional rate for 1916 is still lower, being 21.6. The infant mortality during the year was 110 per thousand births. This is 5 above the rate in 1914, but below the average of the years 1905-1914. The provisional infant mortality rate for 1916 shows a fall to 91, the lowest on record. The civilian death rate was 15.7 per thousand, which is 1.2 above the average for the preceding ten years. However, various factors affect this rate, such as the withdrawal of many young men from civilian life. Most of the principal causes of death showed increased mortality, but scarlet fever, typhoid fever and diarrheal diseases were exceptions. Cerebrospinal fever showed an abnormally high death rate. A curious fact is a remarkable decrease in the number of male suicides. Thus suicides by poison numbered over 500 in 1913, the last complete peace year, while in 1915, the first complete war year, they were only about 300. Various explanations have been suggested. One is the increased price of poisons. But it seems more probable that the war by engrossing attention has to a certain extent diminished the introspection and the preying of personal troubles on the minds of morbidly inclined persons. There was a marked increase of tuberculosis among males and a slight increase among females. It must be borne in mind that these rates refer only to the civil population and are swollen by the healthy males taken away from civil life in large numbers. The *average* age of bachelors marrying spinsters was 27.33 years, and of spinsters marrying bachelors 25.47. The ratio of male to female births was 1,040:1,000. For the year July 1915, to June, 1916 (the first complete year during which the births registered have been fully affected by the war), the ratio is still higher 1,047:1,000. These ratios may be compared with that of the March quarter of 1915, which was not affected by the war and was 1,032:1,000.

PARIS LETTER

Paris, April 26, 1917

The War

TREATMENT OF EMPYEMA FOLLOWING FIREARM WOUNDS OF THE CHEST

The present treatment of empyema consists of free drainage, the injection into the pleural cavity of a liquid to prevent the stagnation of the pus, and the expansion of the lung with or without respiratory gymnastics, so that the lung and the parietes may come in contact with each other. When neither of these expectations is realized, there is initiated a long and unsatisfactory period of successive resections of the ribs, by the operation of Estlander or its modifications. Depage and Tuffier have devised a method of treatment consisting of two steps. First, pleurotomy is performed and the pleura sterilized, then the operation wound is closed. Depage and Tuffier have applied Carrel's method to these suppurations, that is to say, progressive sterilization by means of neutral solution of chlorinated soda used according to Carrel's method. When the bacteriologic findings are such as to indicate sterilization, the wound is closed and transformed into a sterile cavity, a closed pneumothorax, that will resolve itself spontaneously and permit of the contact of the lung and the chest walls.

The first step also includes the exploration of the pleural cavity in order to ascertain its extent, direction and the presence of diverticula. Direct examination with the finger, an instrument or an endopleural light gives exact information. Roentgenography of the chest, after a series of rubber tubes threaded with silver wire have been placed in the pleural cavity shows the threads penetrating all the diverticula and indicates their depth, direction and extent. This exploration having been made, the tubes employed in the Carrel method are introduced into all the diverticula. Injections of the neutral solution of chlorinated soda are continuous or intermittent, every two hours. The dressing is changed every twelve or twenty-four hours. The temperature falls rapidly and the suppuration diminishes, so that when the point of sterilization is reached the compress maintained in the wound may be stained with only a few drops of fluid in twenty-four hours. This sterilization is obtained rapidly in recent cases, and is equally rapid, as has been shown in benign cases (diplococcus, pneumococcus). It is much more difficult to secure, especially to maintain, in chronic cases. Five or six days after this sterilization has been obtained they proceed to the closure of the wound, and for that, especially when it is a recent case, local anesthesia suffices (three or four injections of stovain at the point of suture). They use deep sutures of catgut and superficial sutures of silkworm-gut. One suture, including muscles and skin passing as nearly as possible to the pleural cavity is sufficient and they obtain thus perfect primary union. The deep raw surface not sutured and in contact with the pleura need not be disturbed, as it is sterile and heals without giving any trouble The results of the operation are that the wound unites, the temperature becomes normal, the wound becomes cicatrized, and the respiration extends to all parts of the lung During the period of healing the patient is required to make expiratory efforts in such a way as to distend the lung as much as possible.

The method is applicable in certain nonsurgical cases of purulent pleurisy as well as in traumatic pleurisies Of twelve observations of Depage and Tuffier, ten were cases of traumatic pleurisy (in three of which there were bronchopleural fistulas), and two were nonsurgical purulent pleurisies Of the ten traumatic pleurisies, five were the result of wounds from shell fragments four from bullet wounds, and one from a fragment of a bomb In two cases thoracotomies were performed on the day of the wounding The other interventions had taken place from nine to seventy-seven days after the wounding The time elapsing between the wounding or the beginning of the lesion and the closure had been from twelve days to a year As a result of treatment, in seven cases there was complete recovery, in four others the results were uncertain, in one case the patient was still under treatment

Summarizing, Depage and Tuffier think that a purulent pleurisy can be sterilized in many cases by the method of Carrel, when the pleurisy is sterile, the operation wound can be closed without disturbing the cavity underneath In a certain number of cases the outcome can be improved, and this Depage and Tuffier insist should be attempted

In line with the communication of Depage and Tuffier, Toussaint declares that he is always able to prevent persisting pleural fistulas for which the two surgeons have conceived their treatment, treating the empyema thus, as soon as it is diagnosed thoracotomy with resection of the rib at the base, introduction of the index or index and middle fingers into the pleural cavity, detachment and extraction of the false membrane—a veritable curettage of the pleura—drainage with two drains, irrigation every other day with 25 per cent. hydrogen peroxid, and dressing with levigated boric acid powder in case of blue pus Thanks to this technic, displacement of the lung is prevented and we are assured of the emptying and disinfection of the pleura a cure without a persistent fistula, and the more or less rapid return of the patient to the front

TREATMENT OF SALIVARY FISTULA FOLLOWING WAR WOUNDS

Morestin, who has treated sixty-two cases of such fistulas (of which thirty were of the gland, thirty of the canal and two involving the gland and the canal), presented to the Paris Surgical Society the results of his experience. The treatment of fistulas following war wounds may be reduced to a few simple rules First, it is unnecessary to say that many of these fistulas close spontaneously The indication the most common and the most essential from the point of view of operative technic, is to extirpate with the greatest care the entire fibrous mass and the fistulous tract, preserving the soft and healthy tissues, when it is a fistula of the gland to bring together the sides of the glandular excavation by layers of sutures and to seal hermetically the orifice that allows the escape of the saliva For fistulas of the canal of Stenson, while it is true that satisfactory results may be obtained by divers procedures, it seems that only two are applicable in the cases actually presenting the extirpation of the fistula, the mass of fibrous tissue and the mutilated portion of the canal, with establishment of drainage into the mouth, or extirpation with ligature and burying of the stump of the canal Either method will cure the patient, but in case the first fails to secure the establishment of an artificial canal the second seems more tempting, more clear, more rapid, and appears, in consequence, particularly to be recommended

NECESSITY FOR TREATING SPINAL DEFORMITIES

Having ascertained that subjects of spinal deformities have been kept in the base hospitals for prolonged periods without being subjected to neurologic examinations permitting the determination of their condition and the institution of treatment which frequently would produce rapid benefit, the Neurological Society of Paris has expressed the view that all subjects presenting spinal deformities hospitalized in the sanitary formations of the rear should be sent to the regional neurologic centers and given the necessary roentgenologic and neurologic examinations and treatment appropriate to their condition, and also that the proper medicomilitary measures may be taken in regard to them

WATERPROOFING CLOTHING AND SHOES

Nievenglowski has communicated to the Academy of Sciences a formula for waterproofing shoes and clothing It consists of a solution of paraffin in gasoline in the proportion of 30 gm per liter It is employed cold for clothes by dipping them into the solution For shoes it may be applied warm with the aid of a brush The procedure preserves for cloth and leather their softness and their color, and in addition has the advantage of waterproofing uniforms without requiring removal of the buttons, ornaments or insignia

INDUCED ERUPTIONS IN SOLDIERS

Milian, physician to the hospitals of Paris, at the medicosurgical reunion of the Fifth Army, called attention to the increasing number of induced eruptions of variable clinical aspect These artificial eruptions are grouped under several types, of which the most interesting are

1 Eczema-like eruptions that represent well the aspect of induced dermatites, but of which as such the diagnosis is always difficult. They present frequently the characters of acute facial eczema, but subside in four or five days Relapses appear suddenly and early in the morning, and the lesions present at once the maximum development of the eruption One never encounters the minute vesicles of eczema, or the depression following the rupture of the vesicles

2 Pustular eruptions, which are more frequent than the preceding They are characterized by the eruption, on the hairy parts, by preference, in local regions easily accessible, of little pustules, full, nonumbilicated, frequently surrounding individual hairs, but these pustules have no areola and are all of the same age They disappear completely in a few days Relapses frequently follow, also, in series, suddenly and in the morning The lesions may be confounded with the pyodermatites and nontrychophytic sycosis

3 Pemphigoid eruptions, more rare, manifested by the appearance of great bullae or phlyctens, sometimes of the size of a large hazelnut, with a base of healthy skin, without redness, disappearing quickly in a few days, but reproducing themselves in the form of successive explosions

4 Persistent sores, maintained with the aid of caustics or vesicants, presenting, sometimes, difficulty in diagnosis from gummatous ulcers

5 Mucous plaques, resembling those of syphilis, well treated but returning with new lesions in the mouth, resembling the mucous plaques of the inside of the cheeks, of the lower lip, or of the velum palati But the eruptions on the fauces are ulcerations rather than papulous eruptions, there is no inflammatory reaction, there is no tendency to cicatrization, and they occur in crops They are lesions produced by burns and not mucous plaques

The diagnosis of induced eruptions is always difficult The admission of fraud is obviously rare The usual means of diagnosis consists especially in the lack of frankness of the subject, the absence of the signs characteristic of each eruption, the irregularity of the symptoms, the presence or exaggeration of abnormal signs, the provocation of a new eruption on a disguised suggestion, the spontaneous and rapid cure, the relapses, sudden and in series, etc

WORKSHOP FOR THE CRIPPLED

The president of the republic recently visited, at Grand Palais, one of the most interesting institutions established since the beginning of the war The Union of the Foreign Colonies in France, which was organized to help the victims of the war, consists of generous philanthropic foreigners As stated in a previous letter (The Journal, July 22, 1916 p 297), the purpose of this foundation is to reeducate crippled and mutilated soldiers, so that they may return to civil life with a feeling of self-confidence The institution at Grand-Palais represents only one result of the work done. Other activities of this foundation are the following (1) the so-called "placing bureau" and a medical service (rue Scribe, No 11), (2) a boarding school for invalids while being reeducated (quai Debilly, 28), (3) a second school of professional reeducation at the Maison-Blanche at Neuilly-sur-Marne (The Journal, Sept 16, 1916, p 891), (4) an agricultural center, the most important, at Juvisy-sur-Orge The president of that association is M W V R. Berry, president of the American Chamber of Commerce of Paris The secretary-general and treasurer are both well known Hollanders, MM Joseph Ascher and M Van Hemerst The council of administration contains the names of all the principal bankers and merchants of the allied countries

Association News

NEW YORK CLINICAL SESSIONS

(Continued from page 1495)

On account of lack of space the remainder—more than half of the clinical programs—will not appear in The Journal The complete program is available and will be mailed to those who request it, sending to the committee a stamped addressed envelope Address 17 West Forty-Third Street, New York City

Admission Tickets to the Clinics, Demonstrations and Exhibits incorporated in the Clinical Sessions program will be issued *only* to members and guests who register and make application at the American Medical Association Headquarters

Guests other than physicians and dentists will not be admitted to the medical and surgical clinics

Special Badges and Buttons will be issued to guests (other than physicians and dentists) of the Clinical Sessions and of the American Medical Association who wish to attend the demonstrations, moving pictures and exhibits or inspect the different nursing medical, municipal and public health institutions arranged for in the program by the Committee on Preventive Medicine and Public Health and the Committees on Allied Topics, including Trained Nursing and Training Schools District Nursing System, Hospital Social Service, and Planning and Financing of Municipal and Nonmunicipal Hospitals

Fellows of the American Medical Association may apply in advance by mail for tickets of admission to the Clinical Sessions In writing for the three sessions (Monday afternoon, Tuesday morning and Tuesday afternoon) give first, second and third choice, as seating capacity of amphitheaters is limited Tickets of admission will be delivered after registration at the American Medical Association Headquarters

GENERAL CLINICAL SESSIONS COMMITTEE

Wendell C Phillips, Chairman
Samuel G Gant, Sec **D Campbell, Asst. Sec**
Alexander Lambert **Floyd M Crandall**

Marriages

A. Weise Hammer M D, to Miss Helen Daniel von Nostrand, both of Philadelphia, at Atlantic City, N J, April 14

Marion Arthur Blankenhorn M D, to Miss Martha Findley Taggart, both of Cleveland, at Columbus Ohio, May 1

Lonnie Alfonso Coffin M D., Farmington, Iowa, to Miss Gretta Harmon of Des Moines Iowa at Farmington, April 19

Josiah Baker Henneberger, M D, U S Army, to Miss Gabriella Edilena Lassell both of Washington, D C, May 5

Sylvester Doggett M D, Bradford Ark to Miss Mae Wilson Thomas of Sheldon, Mo, at Nevada, Mo, May 6

Earl Owen Reynolds M D, Greenfield, Iowa, to Miss Clyde Rigdon of Louisville, Ky, at Greenfield, March 22

Clarke Wilson Mangun, M D., Kansas City Kan, to Miss Vallie Hazel Hoffman of Galena Ill May 10

Lieut Philip Palmer Green M C, U S R., St. Louis, to Miss Juliette Loving of Richmond Va., May 5

William Hulbert Banks M D, Hudson, Wis, to Miss Bess Gibson of Windom, Minn, April 30

William Joseph MacMurtrie. M D., to Miss Marie Adele Edelman, both of Philadelphia, April 11

Carl Ten Broeck M D., Princeton N J, to Miss Janet Rinaker of Carlinville, Ill., April 28

William Hal Neel, M D., to Miss Terres Russell, both of Bowling Green Ky., April 18

Robin W C. Francis, M D, to Miss Laura J Wilson, both of Cincinnati, May 2.

Fred M Smith, M D, to Miss Helen Louise Bushee, both of Chicago, recently

Frank Matthew Conlin M.D., Omaha at North Platte Neb., April 10

Deaths

Winslow Anderson, M D, San Francisco, University of San Francisco, 1884, M R C P London, M R C S Eng, and L S A London, 1891, aged 56, a Fellow of the American Medical Association, and since 1896 a member of the General Medical Council of Great Britain, founder of St Winifred's Hospital, San Francisco, assistant to the chair of materia medica and medical chemistry and later adjunct professor of theory and practice of medicine in his alma mater, since 1896, professor of abdominal surgery and gynecology in and president of the College of Physicians and Surgeons, San Francisco, editor of the *Pacific Medical Journal* for many years, colonel and surgeon general of the National Guard of California from 1900 to 1911, died in New York, May 7

Roberts Poinsette Izlar, M D, Waycross, Ga, Medical College of the State of South Carolina, 1889, aged 50, a Fellow of the American Medical Association, a member of the Association of Military Surgeons of the United States, once president of the Florida State Association of Railway Surgeons and Florida Medical Association, consulting surgeon to the Plant System, major and surgeon of the First Florida Infantry, U S Volunteers, during the war with Spain, city physician of Waycross and at one time a member of the city council, died at his home, April 29

Henry Winans Burnett, M D, Providence, R. I, Long Island Hospital College, Brooklyn, N Y, 1897, aged 44, a Fellow of the American Medical Association, and a member of the Association of Military Surgeons of the United States, and New England Pediatric Society, a specialist in the diseases of children, formerly captain in the Medical Corps of the Rhode Island National Guard and Assistant Surgeon General, pediatrist to the Rhode Island Hospital, North End Dispensary and St Vincent de Paul Infant Asylum, Providence, died at his home, May 7

John M Farrington, M D, Binghamton, N Y, New York Medical College, New York 1857, aged 84, formerly a Fellow of the American Medical Association, a member of the Medical Society of the State of New York, Surgeon of the One Hundred and Thirty-Seventh New York Volunteer Infantry, during the Civil War, consulting physician to the Binghamton City Hospital, a strong advocate of temperance, died at his home, April 19

Daniel George Reilly, M D, Dayton, Ohio, University of Vermont Burlington, 1894, aged 52, formerly a Fellow of the American Medical Association, a member of the Ohio State Medical Association, consulting physician to St Elizabeth s Hospital Dayton, and surgeon to the various traction companies centering in that city, died in his home, April 30, from heart disease

Lee M Nusbaum, M D, Storm Lake, Iowa, Northwestern University Medical School Chicago 1893, aged 53, a member of the Illinois States Medical Society, local surgeon for the Chicago, Milwaukee & St Paul System, trustee of Buena Vista College, a member of the Storm Lake School Board, died at his home, May 6, from erysipelas

Neil Watson Robinson Straw, M D, Portland, Me, Bowdoin Medical School, Brunswick, Me, 1877, aged 63, a Fellow of the American Medical Association, physician to the Maine Eye and Ear Infirmary, Portland, and to the Cumberland County Jail, died at his home, April 29, from angina pectoris

A Byron Darby, M D, Waterloo Ind, Eclectic Medical Institute, Cincinnati, 1863, aged 77 formerly a Fellow of the American Medical Association, and at one time president of the DeKalb County, Ind., Medical Society, for more than half a century a practitioner of Waterloo, died at his home, April 27

John H Wetzel, Ravenswood, W Va (license, W Va 1881), aged 62, formerly a Fellow of the American Medical Association, secretary-treasurer of the Jackson County Building and Loan Association, died in a hospital at Wheeling April 10, from a nervous breakdown

Harry M Lamberson, M D., Colorado Springs, Colo, Medical College of Indiana Indianapolis, 1902, aged 42 formerly a Fellow of the American Medical Association and a practitioner of Connersville, Ind, died at his home April 30, of tuberculosis

James Chapman Morrow, M D., Bellevue Ohio, Cleveland-Pulte Medical College Cleveland, 1902, aged 57 formerly a member of the Ohio State Medical Association, a specialist in surgery, died at his home, April 29, from cerebral hemorrhage

Edwin Burchett, M D, Seymour, Ia, College of Physicians and Surgeons, Chicago, 1903, aged 37, a Fellow of the American Medical Association, vice president of the Peoples Savings Bank, Seymour, died in the Centerville (Iowa) Hospital, April 14

Harry F Kilty, M D, Shenandoah, Pa, Medico-Chirurgical College of Pennsylvania, Philadelphia 1911, aged 27, a member of the Medical Society of the State of Pennsylvania, was shot and killed in his office, May 5, by the husband of a patient

James Bedle Wainwright, M D, Manasquan, N J, College of Physicians and Surgeons in the City of New York, 1877, aged 61, formerly a Fellow of the American Medical Association, died at his home, February 21, from arteriosclerosis

Charles D Alfred Fisher, M D, Detroit, Western University School of Medicine, London, Ont, 1903, aged 36, a member of the Michigan State Medical Society, died in his rooms in Detroit, March 25, from cerebral hemorrhage

William Gale, M D, Westfield N J, Long Island College Hospital, Brooklyn, 1867, aged 85, a member of the Medical Society of New Jersey, died in the Muhlenberg Hospital, Plainfield, N J, April 15, from pneumonia

Frederick L Pohlmann, M D, St Louis, Missouri Medical College, St. Louis, 1897, a Fellow of the American Medical Association, was shot and killed in front of his office in St Louis, May 14 by a former patient

William Edward Baker, M D, Chicago, Jenner Medical College, Chicago, 1900, College of Physicians and Surgeons, Chicago, 1902, aged 44, died in the Frances Willard Hospital Chicago, May 5, from pneumonia

Frank G G Denebrink, M D, Sheridan Wyo, University of Munich, Bavaria, 1891, aged 53, a member of the Wyoming State Medical Society, died at Long Beach, Calif, March 11, from acute nephritis

Royal J Kingsley, M D, Seattle, Hamline University, Minneapolis, 1908, aged 33, a Fellow of the American Medical Association, a specialist in surgery, died at his home, May 4, from heart disease

George Henry Burleigh, M D, Estelline, S D, Trinity Medical College, Toronto 1900, aged 46, a Fellow of the American Medical Association, a specialist in surgery, died at his home, April 30

Benjamin M Cromwell, M D, Eckhart Mines, Md, New York University, New York, 1857, aged 82, surgeon in the Confederate service throughout the Civil War, died at his home, April 30

Samuel Derickson, M D, Bedford, N Y, College of Physicians and Surgeons in the City of New York, 1890, aged 48, died at his home, April 29, from cerebral hemorrhage

Samuel Mercer Schell, M D, Hamilton Ohio, Homeopathic Hospital College, Cleveland, 1865, aged 77, died at his home, April 27, from cerebral hemorrhage.

Edwin Prouse, M D, Windsor, Ont, Trinity Medical College, Toronto, 1879, University of Toronto, 1888, aged 67, died at his home, January 27, from nephritis

James H Waddell, M D, Wauseon, Ohio, Hahnemann Medical College, Chicago 1886, aged 63, a veteran of the Civil War, died at his home, April 21

John Abbott Crosby, M D, Minneapolis, Harvard Medical School, 1882, a Fellow of the American Medical Association, aged 62, died at his home, May 1

Luke Channeller Higgins, M D, Parsons, Kan, University of Buffalo, N Y, 1868, aged 71, died at the home of his daughter in Parsons April 9

R C Kennedy, Fayetteville, Tenn (license, Tennessee, 1889), aged 61, also a druggist, died at his home, April 21, from cerebral hemorrhage

Richmond Simmons, M D, De Witt Mich, Pulte Medical College, Cincinnati 1878, aged 70, died at his home, April 22 from heart disease

Charles Aristides Russell Moore, M D, Mount Jackson, Va, Hahnemann Medical College, Philadelphia, 1870, died at his home, April 19

John R Porter, Lebanon, Ind (license Indiana, 1897), aged 69, died at his home, March 9, from cerebral hemorrhage

Henry H Jackson, M D, Chicago, Homeopathic Hospital College, Cleveland 1865 aged 77, died at his home, April 8

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE CLAIMED GALACTAGOGUE EFFECTS OF NUTROLACTIS AND GOAT'S RUE NOT SUBSTANTIATED

Report of the Council on Pharmacy and Chemistry

Specific lactagogues—drugs which stimulate the secretion of milk—are unknown to science Yet medical publications give space to advertisements of a proprietary—"Nutrolactis"—which is said to increase the milk supply of nursing mothers Since dependence on a preparation of this kind is likely to cause neglect of the only means of increasing a scanty milk supply of nursing mothers, this proprietary and the drug "goat's rue," (*Galega officinalis*) which the proprietors hint as being the potent constituent, were subjected to a critical study to determine their possible influence on milk secretion For this purpose the Council secured the help of A J Carlson, Ph D, professor of physiology, University of Chicago Dr Carlson, with the aid of A Woelfel, M D, and Marian Lewis, Sc M, undertook to estimate the effect of Nutrolactis and of goat's rue on nursing dogs and goats with the intention of extending the study to nursing mothers if the animal experiments so warranted The contribution, "The Alleged Galactagogue Action of Galega and Nutrolactis," by Marian Lewis and A J Carlson from the Hull Physiological Laboratory of the University of Chicago, which appears below, shows that Nutrolactis and goat's rue are without influence on the milk secretion in nursing animals

The Council endorsed the work of Lewis and Carlson and held that the claimed galactagogue effects of Nutrolactis and goat's rue are *not substantiated*

W A Puckner, Secretary

The Alleged Galactagogue Action of Galega and Nutrolactis[*]

Marian Lewis, Sc M, and A J Carlson, Ph D
CHICAGO

It is well established that the food best adapted to the energy and growth requirements of the infant is normal mother's milk Any decrease in quantity or deterioration in quality of the maternal secretion is soon followed by a parallel impairment of growth, loss of weight, or lowered resistance to infection in the infant The widespread occurrence of deficient milk secretion in mothers is a matter of common knowledge The discovery of true lactagogues, or specific substances which increase the quantity and quality of the milk on being administered to nursing mothers, would therefore be of very great importance In view of this great medical and economic interest in true lactagogues it is not surprising to find that the medical and biologic literature records discoveries of lactagogues, based on hope rather than demonstration, and that spurious lactagogues are on the market

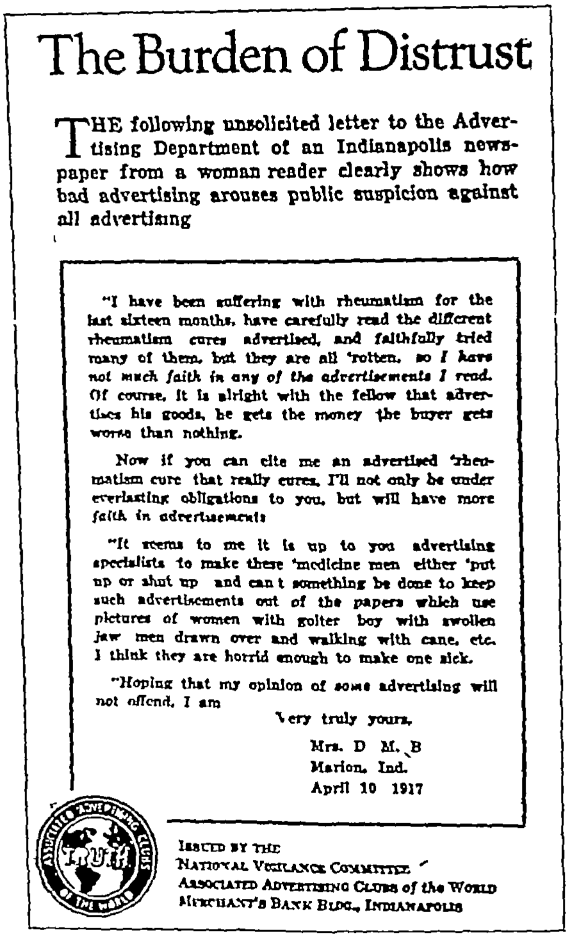
Some of the factors known to affect milk secretion are general health, food supply, psychic state and heredity The mechanism of secretion and the method by which these factors affect it are imperfectly understood In general it has been observed that milk yield improves both in quantity and in quality with improvement in general health, better food supply and more favorable psychic state The influence of heredity is taken advantage of by dairymen who are well acquainted with the potential milk production of the different breeds of cattle.

---

[*] From the Hull Physiological Laboratory of the University of Chicago

[*] This investigation was begun in 1915 by Drs A Woelfel and A J Carlson

Among the substances which have been reported to stimulate milk secretion may be mentioned the extract of the posterior lobe of the hypophysis But pituitary extract is not a true lactagogue, because its action is confined to the smooth musculature of the gland ducts, causing a more or less complete ejection of the milk already formed, it has no effect on the gland cells or the actual secretory process in the direction of increasing the milk yield Extracts of thymus, corpus luteum, ovaries, uterus, placenta, fetus and the mammary gland itself have also been reported to have a temporary stimulating effect on the quantity of milk secreted, but when these extracts are given by mouth they are apparently without specific influence on the mammary gland



The Burden of Distrust

THE following unsolicited letter to the Advertising Department of an Indianapolis newspaper from a woman reader clearly shows how bad advertising arouses public suspicion against all advertising

"I have been suffering with rheumatism for the last sixteen months, have carefully read the different rheumatism cures advertised, and *faithfully* tried many of them, but they are all 'rotten. so *I have not much faith in any of the advertisements I read.* Of course, it is alright with the fellow that advertises his goods, he gets the money the buyer gets worse than nothing.

Now if you can cite me an advertised 'rheumatism cure that really cures, I'll not only be under everlasting obligations to you, but will have more *faith in advertisements*

"It seems to me it is up to you advertising specialists to make these 'medicine men either 'put up or shut up and can t something be done to keep such advertisements out of the papers which use pictures of women with goiter boy with swollen jaw men drawn over and walking with cane, etc. I think they are horrid enough to make one sick.

"Hoping that my opinion of some advertising will not offend, I am

Very truly yours,

Mrs. D M. B
Marion, Ind.
April 10 1917

Issued by the
National Vigilance Committee
Associated Advertising Clubs *of the* World
Merchant's Bank Bldg., Indianapolis

This is a slightly reduced reproduction of one of several leaflets sent out by the National Vigilance Committee of the Associated Advertising Clubs of the World It is by such constructive work as this that public confidence in advertising is being restored.

Galega or goat's rue (*Galega officinalis*) is an herb described in the National Formulary as being slightly bitter and astringent In 1873 Gillet-Damotti,[1] in a communication to the French Academy stated that this plant when fed to cows increases the secretion of milk from 35 to 50 per cent. Other French writers have affirmed that goat's rue is a lactagogue In Germany, Fragner[2] made a preparation called Galegal, using galega as the active principle and combining it with lactose to give it a pleasant taste and make it soluble in water milk, coffee and tea This preparation was reported on favorably by Scherer[3] who asserts that he obtained positive results in fifty-four of the eighty cases in which he used it

More recently Huët[4] tested the effects of Theinhardt's Hygiama lactogene on four lactating women This preparation is said to be composed of hygiama[5] galega and anise. Analysis showed that it contains albumins fat soluble and insoluble carbohydrates salts and water Huet could not observe any influence from the use of this preparation either on the quantity or on the composition of the milk secreted

Nutrolactis[6] is a commercial preparation sold by the Nutrolactis Company of New York at $1 a bottle. The label states that it contains 5 per cent. of alcohol, that it contains fluidextracts of the family of galactogogic plants," and that it is intended to increase the supply of mother s milk ' It is recommended to maintain quality and quantity until the end of normal lactation." Nutrolactis is also recommended for a mother debilitated by lactation. It is claimed that Nutrolactis does not *force* the secretion of milk but merely assists such secretion" Years ago Millbank[7] reported good results from the use of Nutrolactis After more than a year s use he concluded that it was more satisfactory than any other lactagogue hitherto employed by him, which is not saying very much, as specific lactagogues are as yet unknown Nutrolactis is still (1916) extensively advertised in various medical journals as a lactagogue

METHODS OF INVESTIGATION

The alleged lactagogue action of galega and Nutrolactis was tested on lactating dogs and goats In these animals the psychic factors or suggestion, are largely eliminated If the results had been positive or had indicated lactagogue action, the test would have been extended to nursing women The puppies and kids were weighed before and after nursing, and a record kept of the amount of milk obtained at each nursing (the animals nursing from three to five times daily) The mothers were fed with varying doses of the drugs, and the milk yield compared with that of a control period during which no drugs were administered An effort was made to keep the conditions of the experiments uniform throughout

The galega was ground and mixed with the food The Nutrolactis was mixed with food given by the stomach tube, or in some cases with a spoon Galega was tested on two goats and Nutrolactis on one goat and nine dogs The results are given herewith

GALEGA

Goat 1 Control period 1 600 gm milk av daily yield for 7 days

Galega period (30 gm. galega mixed with oats), 860 gm. milk av daily yield for 8 days.

Kids weaned at end of period

Goat 2 Control period 1 161 gm milk av daily yield for 9 days.

Galega period (30 gm galega mixed with oats), 860 gm. milk av daily yield for 8 days

(25 gm galega in same way) 810 gm. milk av daily yield for 10 days

Control period 896 gm milk av daily yield for 6 days.

NUTROLACTIS

Goat 3 Control period 896 gm milk av daily yield for 6 days.

Nutrolactis period (30 c.c Nutrolactis mixed with oats) 658 gm milk av daily yield for 9 days

Control period 666 gm. milk av daily yield for 5 days

Dog 1 Control period 176 gm milk av daily yield for 7 days.

Nutrolactis period (8 c.c. Nutrolactis by stomach tube), 55 gm. milk av daily yield for 12 days

Dog 2 Control period 189 gm milk av daily yield for 6 days

Nutrolactis period (8 c.c. Nutrolactis by stomach tube) 72 gm milk av daily yield for 11 days

Dog 3 Control period 93 gm milk av daily yield for 8 days

Nutrolactis period (8 c.c. Nutrolactis on bread) 17 gm milk av daily yield for 5 days

Dog 4 Control period 28 gm. milk av daily yield for 7 days

Nutrolactis period (8 c c Nutrolactis by stomach tube) 47 gm milk av daily yield for 6 days.

(10 c.c. Nutrolactis by stomach tube) 43 gm milk av daily yield for 8 days.

Control period 41 5 gm milk av daily yield for 6 days

Nutrolactis period (10 c.c Nutrolactis by stomach tube) 33 5 gm. milk av daily yield for 4 days.

Dog 5 Control period 67 gm milk av daily yield for 6 days

Nutrolactis period (10 c.c. Nutrolactis on bread) 81 gm milk av daily yield for 6 days

Dog 6 Control period 40 gm milk av daily yield for 5 days

Nutrolactis period (10 c c. Nutrolactis by stomach tube) 33 gm milk av daily yield for 8 days

Control period 26 gm milk av daily yield for 4 days

Dog 7 Control period, 283 gm milk av daily yield for 9 days.

Nutrolactis period (10 c.c. Nutrolactis by stomach tube) 155 gm milk av daily yield for 15 days

---

[1] Gillet Damotti Compt rend Acad d Sc., July 7 1873

[2] Fragner Wien. med Wchnschr 1910 **60**, 1033 1036

[3] Scherer Wien. med Wchnschr 1910 **60**, 1033 1036.

[4] Huet Nederlandsch Tijdschr v Geneesk. 1914 **1** 1353 1370

[5] Hygiama is said to be a food consisting of condensed milk with (fatless) cocoa and cereals added to it (Encyclopedia and Dictionary of Medicine and Surgery 1907)

[6] The North Dakota Agricultural Experiment Station has recently published (Bulletin 22 1915 p 386) a complete chemical analysis of Nutrolactis. It contains only 0 60 per cent. solids (including strychnin and emodin) It has a bitter taste. The alcohol content was 3 5 per cent The report concludes a little strychnin a little alcohol and a little laxative is about all there is to cause an increase in the milk secretion"

[7] Millbank New York Med Jour 1889 **50**, 544

(15 c c Nutrolactis by stomach tube), 82 gm milk av daily yield for 6 days

Control period, 33 gm milk av daily yield for 3 days

Dog 8 Control period 238 gm milk av daily yield for 8 days

Nutrolactis period (20 c c Nutrolactis on bread), 223 gm milk av daily yield for 4 days

(20 c c Nutrolactis on bread), 46 gm milk av daily yield for 6 days

Dog 9 Control period 223 gm milk av daily yield for 6 days

Nutrolactis period (10 c c Nutrolactis on bread), 178 gm milk av daily yield for 15 days

(15 c c Nutrolactis on bread), 146 gm milk av daily yield for 5 days

COMMENT AND CONCLUSION

Goat 1 had already been lactating for over two months, and the yield was gradually decreasing at the time the observations were begun The administration of galega did not check this decrease Goat 2 should have been a very favorable subject, for the kid was about a week old at the time the observations were begun Both galega and Nutrolactis caused a decrease in milk yield of this animal This decrease is perhaps partly due to the animal's distaste for the drugs and her consequent failure to eat as well as during the control periods

Administration of Nutrolactis was accompanied by an increase in milk in only two animals, Dog 4 and Dog 5 A detailed examination of the records of these two dogs shows that in both cases *there was a progressive increase in milk yield during the control period* and that administration of the drug failed to accelerate this increase On the contrary, the curve for Dog 5 takes a sudden drop immediately after the first administration of the drug

The records of Dogs 6 and 7 show that the yield during the second control period is lower than that of the preceding periods Although the administration of the drug in both cases was followed by a decrease in the yield, it may be urged that the drug has some lactagogue action, for its discontinuance was followed by a decrease in yield This effect, however, is also apparent rather than real, for the data show a gradual falling off in yield during the period of administration of the drug, which decrease was not accelerated by withdrawing the drug

Our data show that galega and Nutrolactis, when taken by mouth, and the elements of suggestion excluded, had no beneficial effect on lactation—at least so far as the quantity of milk is concerned

---

Correspondence

ABROGATE THE PATENT ON SALVARSAN

To the Editor —Considerable interest has been arou aged 48,
Congress concerning the abrogation of the patent ri e
salvarsan This drug was patented by Ehrlich and B Homeo-
citizens of the German empire These patents wer , died at
to Farbwerke vorm Meister, Lucius and Bruening
a M, Germany, a corporation No American Medical Col-
as we could learn was mentioned 388, aged 67,

There is a branch of this firm, or an agent,
who has entire charge of the sales in the , Hahnemann
The patents are very comprehensive and co a veteran of the
of manufacture the chemical substance, the
ing it into ampules, the process of preparati Harvard Medical
its being used and, finally, the name is trade- dical Association,
the patent on the process of manufacture N
are five separate claims In order to show Kan , University
these rights we cite claim No 3 the home of his

> "The process of manufacturing new arsenical re
> sists in treating nitrooxyphenylarsinic acids with icense, Tennessee,
> agent, as hereinbefore described " his home, April 21,

By this it will be seen that the use of any
agent on any of the substances belonging ich , Pulte Medical
nitrooxyphenylarsinic acids is forbidden at his home, April
basic reaction and such a comprehensive
manufacture of all allied processes is absol D , Mount Jackson,
Furthermore, there are eight claims on adelphia, 1870, died
taining the substance with a *nonoxidizing*
there are seventeen *claims* on the final se Indiana, 1897),
redissolving with sodium hydroxid just pr 9, from cerebral

neopathic Hospital
his home, April 8

injected It would appear from this that a physician would infringe the patent rights if he used this method of preparation on any salvarsan or similar compound not made by this German firm These patents run for seventeen years, but apparently the trademark on the name "salvarsan" is permanent It is a matter of common experience that when a substance has been known for seventeen years under one name, the rights practically become perpetual, for neither will the public nor the profession accept the same substance under another name The practical point at issue is that while the patent has eleven years yet to run, it in effect goes to perpetuity

There is no other country that allows the comprehensive and iron-clad protection that the United States does In Germany the process of manufacture is patented, but not the chemical substance, so that if an ingenious individual can devise a different method of manufacture, he can make and sell the substance under its chemical name In the United States it matters not how ingenious any one may be, he is absolutely blocked by the patent on the chemical substance Several years ago efforts in Congress to pass a law
changing these patent grants failed, and it is stated that
failure was due to the activities of representatives of Grs
interests
to a
The retail price of an ampule containing 6 decigr ilk
salvarsan has varied from time to time At present it s f
$4 50 While the cost of such an ampule cannot be specific
stated, it has been estimated to be from 14 to 35 ce
A well known and thoroughly responsible man, who has
practical experience in manufacturing the drug on a fa f
large scale, promises to sell it after some time (in two yea
at 50 cents per dose The foregoing estimation can be su
plemented by the following So far as we have been abl
to learn from the description of the patents and what has
been told us by chemists, the following chemicals are used
In making salvarsan the two basic substances are anilin at
50 cents a pound, and arsenic acid at 90 cents a pound In the
process of manufacture there are used, in addition, oxalic
acid at 75 cents a pound, caustic soda at 40 cents a pound,
nitric acid at 21 cents a pound, sulphuric acid at 16 cents and
pound, magnesiu ged galactagogue effects
hydrosulphit
substanc are not substantiated
W A Puckner, Secretary
price
th

The Alleged Galactagogue Action of Galega and Nutrolactis*

Marian Lewis, Sc M , and A J Carlson, Ph D

CHICAGO

It is well established that the food best adapted to the energy and growth requirements of the infant is normal mother's milk Any decrease in quantity or deterioration in quality of the maternal secretion is soon followed by a parallel impairment of growth, loss of weight, or lowered resistance to infection in the infant The widespread occurrence of deficient milk secretion in mothers is a matter of common knowledge The discovery of true lactagogues, or specific substances which increase the quantity and quality of the milk on being administered to nursing mothers, would therefore be of very great importance In view of this great medical and economic interest in true lactagogues it is not surprising to find that the medical and biologic literature records discoveries of lactagogues, based on hope rather than demonstration, and that spurious lactagogues are on the market

Some of the factors known to affect milk secretion are general health, food supply, psychic state and heredity The mechanism of secretion and the method by which these factors affect it are imperfectly understood In general it has been observed that milk yield improves both in quantity and in quality with improvement in general health, better food supply and more favorable psychic state The influence of heredity is taken advantage of by dairymen who are well informed by one of the staff, was over 26 per cent positive. Among the applicants for the army over a given period, 15 per cent were found syphilitic. It would seem, therefore, that we are justified in estimating that there are in the United States from 6,000,000 to 8 000 000 syphilitics. We are quite aware that in the rural population the disease is not nearly so prevalent as in cities and towns, but we believe that it exists there to the extent of about 4 per cent. Recent investigations have shown that aortitis is largely syphilitic in origin, that certain conditions of the heart, particularly around the aortic valve are syphilitic, that angina pectoris is sometimes caused by this disease, that cancer of the tongue rarely develops in a nonsyphilitic individual, and that cancer of the rectum is more often found among syphilitics than among nonsyphilitics, that aneurysm of the aorta is almost always syphilitic in origin, and that locomotor ataxia and general paresis have no other known cause. There are encouraging signs of an awakening as to the need of more adequate treatment for syphilis in hospitals and dispensaries. Several of these have already organized special departments, and others are sure to follow. Certain cities are establishing free dispensaries for syphilis and gonorrhea. The army medical officers will find a large number of syphilitics in examining recruits and the social disruption caused by the war will greatly increase the malady.

---

* From the Hull Physiological Laboratory of the University of Chicago

* This investigation was begun in 1915 by Drs A Woelfel and A J Carlson

All this goes to show the great and immediate need of a large supply of salvarsan at a price within reach of hospitals and the poor. We need it not only for the period of the war, but we may need it more after the war because then we may have to treat this multitude of recently infected individuals.

We submit that no government should permit the patenting, and therefore the private control of an agent which is of such great value to the welfare of its people and so strikingly needed by so many of its poor. This is an instance in which property rights are held higher than fundamental human rights; nay more, where the health and even the lives of citizens are allowed to be sacrificed rather than interfere with an alien's claim. Is it not time for Congress to adjust this matter and not allow this iniquitous condition longer to survive?

We urge, therefore, that the medical societies of the country by resolutions ask Congress permanently (not merely during the period of the war) to abrogate the patent rights on this preparation; in addition, we urge that personal letters be sent to congressmen. Three of these communications should be sent, one to the representative in Congress of the territory from which the communication is sent, one to the chairman of the committee on patents of the House and one to the chairman of the committee on patents of the Senate. It is specifically urged that permanent adjustment be requested, and not simply a war measure.

J. M. T. Finney, M.D.,
George Walker, M.D.,
Baltimore.

NIGHT CLINIC ON INDUSTRIAL MEDICINE AND SURGERY AT RUSH MEDICAL COLLEGE

To the Editor:—Rush Medical College started a course on industrial medicine and surgery at the beginning of the present year. The course is conducted by lectures and a dispensary clinic, and is held at night. Several medical schools have offered courses on occupational diseases, industrial hygiene, vocational diseases or some other branch of industrial medicine but this I believe is the first school to offer a comprehensive course covering all branches of industrial medicine and surgery. The idea is also unique of holding this clinic at night which is certainly the logical time, for the clinic is meant primarily for the poor wage earner or for the employee of the small industry who has a large family dependent on him and who cannot get proper medical care either at home or in the industry at which he is employed.

A course on industrial medicine and surgery to be comprehensive must include the following branches: occupational diseases—prevention, diagnosis and treatment, supervision of health of employees, including periodic medical examination of employees, medical examination of applicants for work, prevention of disease among employees, industrial hygiene and plant sanitation, care of injured employees, which must include emergency surgery, first aid, all medicolegal aspects of the result of injury, and the surgeon's part in accident prevention work, prevention of accidents, including the "safety first" movement, cooperation between the physician and the safety engineer, and socialized medicine, including the treatment of certain diseases, the class of employees who should receive free medical care, the work of the visiting nurses among employees, and the duties of the social worker.

One of the purposes is to make a general survey of the health condition of every employee who reports to the clinic. Thus, a medical examination is made of every patient, whether he reports to the dispensary on account of some minor injury or because he has a slight cold. A general physical examination is given, and then the patient is passed on for a dental examination, a nose and throat and eye examination, into the hands of the genito-urinary department, and through the orthopedic department, in order to ascertain the condition of his feet, a very important part of the survey of a working man's condition. Through the aid of the social workers a survey is likewise made of the patient's home and working conditions. With this comprehensive survey of the physical condition of the employee, his living conditions and his working conditions, we are usually able to correct all things which are proving detrimental to that employee's health. Likewise, it gives the student a broader relationship toward his patient than he has ever had before. He obtains not only the medical aspect of the case, but also the medicosociologic aspect. It is a course designed to fit the student for this new specialty, industrial medicine and surgery.

Cooperation between the night clinic and the employers of the patients will be secured through the services of a social worker, who will visit the working places of these patients and secure such changes in work or such means of prevention as have been developed by each individual case.

Frequently such agencies as the United Charities have individuals or families applying to them for aid because of real or feigned inability to work. These individuals will be referred to the department of industrial medicine and surgery for examination and recommendation as to the expected duration of such inability, if it is found to exist, and as to the kind of work the patient may do. Here again it will devolve on the social worker either to secure employment for such patients or to cooperate with the United Charities.

One of the most important functions of this clinic will be the study and treatment of occupational diseases, and, through the social worker securing the cooperation of employers for the prevention of such diseases.

Harry E. Mock, M.D., Chicago.

Child Labor on the Farm.—A *Bulletin* of the National Children's Bureau gives information of the results of the employment of children on the farms of England following regulations providing for exemption from school for this purpose. The granting or withholding of exemptions has been in most places in the hands of the local educational authorities but their policy has not been uniform, and there has been complaint in some sections. The board of education has advised the local authorities that the employment of such labor was to be considered as an unusual measure, and that exemptions should be granted after the personal investigation of each case; that they were to see that adequate wages were offered, and that in no case should children be excused from school when children past the age of compulsory attendance were available. The authorities should secure particulars of the work, the wages offered and the period for which the labor was required, the work should be light and suitable for the child. A year after the promulgation of these regulations[1] a stiffening of conditions was urged, and it was required that the exemptions should be reviewed at least once in three months.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alaska Juneau, July 3 Sec, Dr H C DeVighne, Juneau

Arizona Phoenix, July 2 3 Sec, Dr John W Thomas, 306 Goodrich Bldg, Phoenix

Colorado Denver, July 3 Sec, Dr David A Strickler, 612 Empire Bldg, Denver

Delaware Dover and Wilmington, June 19 21 Sec, Dr H W Briggs, 1026 Jackson St, Wilmington

Florida, Regular Palatka, June 19 20 Sec, Dr E W Warren, Palatka

Georgia Atlanta and Augusta, May 31 June 2 Sec, Dr C T Nolan, Marietta

Illinois Chicago, June 14 16 Sec, Dr C St Clair Drake, Springfield

Iowa Iowa City, June 7 9 Sec, Dr G H Sumner, Capitol Bldg, Des Moines

Kansas Topeka, June 19 21 Sec, Dr H A Dykes, Lebanon

Kentucky Louisville, June 19 21 Sec, Dr A T McCormack, Bowling Green

Louisiana New Orleans, June 7 9 Sec, Dr J A Henderson, 921 Canal St, New Orleans

Maine Augusta, July 5 6 Sec., Dr Frank W Searle, 776 Congress St, Portland

Maryland Baltimore, June 19 Sec, Dr J McP Scott, 137 W Washington St., Hagerstown

Michigan *Ann Arbor June 12 14 Sec, Dr B D Harison, 504* Washington Arcade, Detroit

Minnesota Minneapolis, June 5 8 Sec, Dr Thomas S McDavitt, Lowry Bldg, St Paul

Mississippi Jackson, June 19 20 Sec, Dr W S Leathers, Oxford

Missouri St Louis, June 18 Sec, Dr J A B Adcock, Jefferson City

Nebraska Lincoln, May 31 June 1 Sec., Dr E Arthur Carr, 516 Banker's Life Bldg, Lincoln

New Hampshire Concord, June 25 26 Sec, Dr W T Crosby, Beacon Bldg, Manchester

New Jersey Trenton, June 19 20 Sec, Dr Alexander MacAlister, 438 East State St, Trenton

North Carolina Raleigh, June 19 Sec, Dr H A Royster, 423 Fayetteville St, Raleigh

North Dakota Grand Forks, July 3 Sec, Dr George M Williamson, Grand Forks

Ohio Columbus, June 11 14 Sec, Dr George H Matson, State House, Columbus

Oregon Portland, June 5 Sec, Dr Herbert S Nichols, Corbett Bldg, Portland

Rhode Island Providence, July 5 Sec, Dr Gardner T Swarts, 315 State House, Providence

South Carolina Columbia, June 12 Sec, Dr A Earle Boozer, 1806 Hampton St, Columbia

Tennessee Knoxville Memphis and Nashville, June 15 16 Sec, Dr A B De Loach, Scimitar Bldg, Memphis

Texas Austin June 19 21 Sec, Dr M F Bettencourt, Mart

Virginia Richmond, June 19 22 Sec, Dr J W Preston, 215 S Jefferson St, Roanoke

Washington Seattle, July 3 5 Sec Dr C N Suttner, Walla Walla

Wisconsin Milwaukee, June 26 Sec, Dr J M Dodd, 220 E 2nd St, Ashland

Connecticut Homeopathic March Report

Dr Edwin C M Hall, secretary of the Connecticut Homeopathic Medical Examining Board, reports the written examination held at New Haven, March 14, 1917 The total number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass, 75 The total number of candidates examined was 2, both of whom passed One candidate was licensed through reciprocity The following colleges were represented

College	PASSED	Year Grad	Per Cent
N Y Homeopathic Med College and Flower Hospital		(1916)	82 5
Hahnemann Med College and Hospital of Philadelphia		(1916)	89 9

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
N Y Homeopathic Med College and Flower Hospital		(1915)	N Jersey

Michigan Reciprocity Report

Dr B D Harison, secretary of the Michigan State Board of Registration in Medicine, reports that the following candidates were licensed through reciprocity from Jan 9 to Feb 23, 1917

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
University of Colorado		(1912)	Colorado
Chicago College of Medicine and Surgery	(1908)	(1914)	Illinois
Rush Medical College		(1915)	Illinois
University of Louisville		(1915)	Kentucky
University of Maryland		(1915)	Maryland
University of Michigan Medical School		(1910)	Illinois
St. Louis University		(1903)	Illinois
Vanderbilt University		(1916)	Tennessee
University of Vermont		(1914)	Maine

Book Notices

A Soldier Doctor of Our Army, James P Kimball, Late Colonel and Assistant Surgeon General, U S Army By Maria Brace Kimball, with an Introduction by Major General William C Gorgas, Surgeon General, U S Army Cloth Price, $1 50 net Pp 192, with illustrations Boston Houghton, Mifflin Company, 1917

This book gives us a glimpse of the army surgeon of the past, when about the only reason for the existence of an army in the United States was the Indian Certainly the principal work of the army was to protect the early settlers of the West from these "wards of the nation," and occasionally the "wards of the nation" from the enterprising frontiersman As General Gorgas says in his introductory letter "The army medical officer on the plains was obliged to combine the duties of surgeon, oculist, aurist, dentist, obstetrician, general practitioner, with scanty help in nursing from the enlisted men of the Hospital Corps to whom he, himself, had taught 'first aid' He was also general health officer of the garrison, was compelled to study and inspect water supply, to plant and irrigate post gardens, and sometimes to manufacture ice In addition, he often had a large free clinic among Indian neighbors, traders and ranchmen" The life of an army officer, and especially of the medical officer, was not altogether delightful, it was monotonous, with plenty of hardship, occasionally some danger, and usually away from civilization and society However, it developed healthy, courageous men —men capable of meeting all kinds of emergencies that we who live in the present "civilized" condition hardly realize Colonel Kimball had his share of this frontier life and Indian fighting, although he lived long enough to see the end of Indian troubles and the elimination of the frontier, and to spend the later years of his life in the East His widow, who writes this brief biography, makes it a charming story, and incidentally reveals what a different life the army surgeon of the past led as compared with the life as led by the present medical officer

A Text Book of Histology By Frederick R Bailey, A M, M D Fifth Edition Cloth Price $3 75 net Pp 652 with illustrations New York William Wood & Co, 1916

The general plan of this book is indicated in the statement by the author that it was primarily intended to be a laboratory and class room manual for medical students As such it is relatively short and devoted rather to a statement of the "essentials" than to a consideration of the problems and literature of the science The chapter on the nervous system, written for recent editions by Prof Oliver S Strong, is more thorough in its method of treatment This edition has been somewhat revised, and illustrations added The revision of the text has not been sufficiently thorough to include some important recent work This is especially true in cytology, in which new methods of cytoplasmic fixation are omitted and mitochondria dismissed with a line or two The same criticism applies to the account of the alimentary tract and the glands associated with it, and the glands of internal secretion The needs of the student, who finds a thorough understanding of histology the key to a thorough understanding of physiology and pathology, will require that this book be supplemented by considerable reference to the literature

The Education of the Young in Sex Hygiene A Text Book for Parents and Teachers By Robert N Willson, M D, Director of the Philadelphia Hospital Postgraduate Course in Internal Medicine Cloth Price, $2 Pp 319, with 72 illustrations Cincinnati Stewart & Kidd Company, 1917

Dr Willson has endeavored to collect in one volume all of the available material that will be of value for parents and teachers in the education of children in sex hygiene While much of the material is excellent, the general effect is rather confusing since the book includes scientific chapters on reproduction, educational charts, and chapters on such variant subjects as public education, venereal diseases and heredity Much of the material is excellent, but much also is superficial

Medicolegal

Injunction Against a "Scientific Manipulator"—Restrictions on Masseurs and Nurses

(State Board of Medical Examiners vs Terrill (Utah) 161 Pac R 451)

The Supreme Court of Utah affirms a decree by which the defendant was 'restrained, prohibited and enjoined from diagnosing, treating, operating on, prescribing or advising for any person or persons within the state of Utah afflicted with any mental or physical ailment or afflicted with any abnormal mental or physical condition from which person or persons he expects to or has received or does thereafter receive a pecuniary compensation, or from practicing medicine within the state of Utah, until said defendant shall have received a certificate from the board of medical examiners of the state of Utah permitting him to practice medicine within said state" The court says that it was claimed that the decree was too broad, in that it prohibited the defendant from doing merely ordinary massaging Comparing the Utah statute with the decree, however, it will be seen that the decree but follows the language of the statute, and forbids the defendant from doing what the statute itself forbids If the statute forbids mere massaging without a license, then also does the decree If the statute does not, then the decree does not. However, the court thinks that mere "massaging," as that term popularly is understood is not, within the meaning of the statute, 'diagnosing, treating operating on or prescribing or advising for any physical or mental ailment or abnormal condition of another" Thus ordinary massaging is not within the terms of the decree, and hence the defendant is not forbidden doing that. Mere massaging is no more forbidden than mere nursing It is easy enough for a nurse, or a masseur, to keep within his sphere and not encroach in the law by assuming or undertaking to diagnose, treat, operate on, prescribe, or advise for ailments But the trouble with the defendant was this To the public he held himself out as "a scientific manipulator," and as willing and ready to receive and treat patients suffering from all sorts of ailments, but when summoned into court he declared himself to be but a humble masseur, giving only massage treatments and nothing more Let him be to the public what he claimed to be in court, and let him refrain from diagnosing, treating, prescribing and advising for ailments of others and confine himself merely to massaging' as that term popularly is understood Certainly one may employ a trained nurse, who, for compensation and without a license, may accept such employment, and without offending, may, in attendance on a patient, render such service as ordinarily is rendered by a trained nurse, but she may not diagnose, treat, prescribe or advise for ailments in the sense that one holding a certificate or license to practice medicine may do it That also is true of a masseur But the defendant, though merely a masseur claimed the right to do, without a license, all that one holding a license is permitted to do Though a mere masseur, professing no knowledge of the human system, or of diseases to which it is subject, the defendant, nevertheless, undertook and claimed the right to treat about all kinds of diseases Without any knowledge of anatomy or surgery, he undertook to treat a broken or fractured bone of the foot, without any knowledge of pediatrics, he undertook to treat children for leakage of the heart and abdominal affections, without any knowledge of laryngology he undertook to treat tonsillitis, or throat affections without any knowledge of anatomy surgery, bacteriology pathology or histology, or of other scientific subjects, he undertook to treat a boy for hip disease and patients for appendicitis and rheumatism. If a practice of that kind is to be permitted then may we as well go back to the days when surgery was performed by the barber and the healing art administered by the Indian powwow The object of the statute is to protect the sick and suffering and the community against the unlearned and incompetent who hold themselves out as being possessed of peculiar skill in the treatment of diseases, but who are ignorant of the human system and of the diseases to which it is subject.

Some Unusual Requirements in a Milk Ordinance Upheld

(City of Owensboro vs Evans (Ky) 189 S W R 1153)

The Court of Appeals of Kentucky reverses a judgment which dismissed the prosecution on a warrant charging the defendant with the offense of selling milk in the city of Owensboro without a permit from the food inspector and failing to have his cows examined by a veterinarian The underlying question was as to the validity of a somewhat unusual city ordinance, which, on the whole, the court concludes was a proper exercise of the police power conferred on the city One contention, the court says, was that the city council had no power to require the oath prescribed by the ordinance as a condition precedent to the defendant engaging in a lawful business In order to obtain a permit to sell milk in the city, the applicant is required to make oath that he has had his entire herd of cows subjected to the tuberculin test by a graduated veterinarian approved by the city, that so many head were found to be free from tuberculosis or other disease, and that so many head reacted under the tuberculin test, which latter animals he caused to be isolated or killed He is also required to swear that he will conduct his dairy business in accordance with the laws of Kentucky and ordinances of the city, and that he will permit any officer of the city to enter on his premises at any time to inspect his dairy and cattle, his method of handling the milk, etc., and that he will permit his dairy products to be tested at any time by the city The court concludes that, in view of the opportunities for fraud and imposition in the sale of milk, and of the necessity of great precaution on the part of municipal authorities to secure for the people milk that is wholesome clean, and free from disease, the preliminary oath prescribed by the ordinance is not an unreasonable requirement. Another section of the ordinance requires that the milkers must thoroughly wash and wipe their hands and the cows' udders before beginning to milk, that they shall not use pails, cans, etc until they have been thoroughly washed with hot water and soap and afterward sterilized with boiling water or steam, and shall cover their pails cans, etc. with sterilized absorbent cotton between two layers of sterilized gauze, through which the milking shall be done While the method prescribed may strike the dairyman who has never been accustomed to such care, not only as being unnecessary, but also as a flagrant invasion of his right to pursue the old established method, which was accompanied by so much disease and death, the court sees nothing in the foregoing requirements that would justify a holding that the provision is unreasonable and therefore invalid The latter part of the section is "They must refrain from milking or handling milk in anyway when in themselves or families there is even a suspicion of any contagious of infectious disease such as smallpox, scarlet fever, diphtheria typhoid, tuberculosis, or the like" In the court's opinion, this provision should be given a practical construction and read as if the word 'reasonable" were inserted before the word 'suspicion' The purpose was not to permit the dairyman to wait until he was absolutely sure that he or some one of his family had a contagious or infectious disease and then spread the disease throughout the municipality but to require him to act on such premonitory symptoms as would excite in the mind of an ordinarily prudent person a reasonable suspicion that such disease had been contracted When so construed, the court finds nothing in the provision that is unreasonable or oppressive Still another provision was that the milk must not contain over 300 000 bacteria per cubic centimeter, or any pathogenic bacteria of any kind The case was before this court without any evidence tending to show that it was practically impossible for the dairyman to furnish milk of the standard required, and since the municipality has the power to prescribe the standard of quality of the milk sold, the court cannot invade its province and hold that the standard thus prescribed is unreasonable, in the absence of clear and convincing evidence that such is the case. Nor does the court deem invalid provisions that wagons used in the delivery of milk shall be furnished with covers shall be neat and clean kept neatly painted, their interiors scrubbed with soap and water at least twice a week, and that no vegetables or waste products shall be hauled in them

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, NEW YORK, JUNE 4 8

American Academy of Medicine, New York, June 4 5
American Association of Anesthetists, New York, June 2
Am Association Medical Milk Commissions, Brooklyn, June 1 4
Am Climatological and Clin Association, Lakewood, N J, May 29 31
American Dermatological Association, Cincinnati, May 24 26
American Gynecological Society, Pittsburgh, May 31 June 2
American Laryngological Association, Atlantic City, May 28 30
Am Laryn, Rhin and Otol Society, Niagara Falls, Can, June 1 2
Am Medico Psychological Association, New York, May 29 June 1
Am Ophthalmological Society, Virginia Hot Springs May 29 30
American Orthopedic Association, Pittsburgh, May 31 June 1
American Otological Society, Atlantic City, May 29 30
American Pediatric Society, White Sulphur Springs, May 28 30
American Proctologic Society, New York, June 4 5
American Radium Society, New York, June 4
American Society of Tropical Medicine, New York, June 4 5
American Surgical Association, Boston, May 31 June 2
American Therapeutic Society, New York, June 1 2
Assn of Am Teachers of the Diseases of Children, New York, June 4
Conference of State & Prov Bds of N Amer, Washington, May 30 31
Idaho State Medical Association, Sandpoint, June 25 26
Maine Medical Association, Portland, June 12 13
Massachusetts Medical Society, Boston, June 12 13
Montana Medical Association, Kalispell, July 11 12
National Assn for the Study of Epilepsy, Skillman, N J, May 28 29
Oregon State Medical Association, Portland, June 28 30
Rhode Island Medical Society, Providence, May 31
South Dakota State Medical Association, Yankton, May 28 30
Washington State Medical Association, Spokane, June 17 19

NEW YORK ACADEMY OF MEDICINE

Meeting held May 17, 1917

The President, Dr Walter B James, in the Chair

This meeting was arranged in cooperation with the Public Health Committee

Food Supply in War Time

Dr Alonzo E Taylor, Professor of Physiological Chemistry, University of Pennsylvania, Associated with the Department of Agriculture, Washington, D C We are urging people to produce more food, but the production of more food does not mean anything We must produce food that actually means something in the diet of the people We must consider the psychologic side of production, distribution and consumption A given diet may be entirely satisfactory from the standpoint of nutrition, yet if it is of a nature to which people are not accustomed, there will be a reaction against it Again, a diet which people pursuing the normal activities of life may tolerate, since their entire attention is not centered on food, becomes insupportable in a prison camp in which men have little to occupy their minds, the role of food becomes more and more important, and finally becomes an almost overwhelming consciousness

We must bear the burden of supplying food not only for ourselves but also for the Allies With the exception of India and Australia, the entire world is confronted with a failure of the wheat crop Wheat has become the keystone of the diet of the civilized world, about wheat bread and milk centers the food psychology of the civilized races The average daily consumption of wheat in grams per individual is Austria-Hungary, 315, England, 310, France, 410, Germany, 320, Italy, 340, United Kingdom, 275, United States, 265 A failure to maintain the ordinary wheat ration was the first great mistake Germany made The wheat ration there has been cut from 320 to 175 gm It is highly important that the bread ration of the Allies be maintained, particularly that of France England has learned to substitute oatmeal to a certain extent, and Italy uses large importations of maize, but France does not know how to use any substitute for wheat, the health of the French people is already greatly impaired, and it would be a great mistake to impose the use of another cereal on France This is no time to experiment on the Allies, if an experiment must be made, the United States is in a better position to stand it

It is essential that every person in France be provided with his full customary ration of 410 gm of wheat daily There are three ways in which we may stretch our wheat by saving what is used in industries, by extracting a higher percentage of the grain in milling, or by using mixed flours The amount of wheat used for the manufacture of alcohol for industrial purposes is insignificant, and little wheat is used in the manufacture of whisky or beer Forbidding the use of barley in the manufacture of beer would probably result in a larger consumption of whisky Brewers, however, have shown a remarkable ingenuity in reducing the amount of grain used in the manufacture of alcoholic beverages Cutting down the manufacture of alcohol for industrial purposes would be a mistake A second way of saving is by increasing the percentage of extraction in milling In this country we extract about 72 per cent of the whole grain for flour The bran and middlings, the remaining 28 per cent, is utilized as food for cattle In certain portions of the country where a substitute food for cattle is not available, a higher milling extraction would cut the milk supply as much as 18 or 20 per cent Before taking such a step we must find a substitute food for cattle, and this may be found in the velvet and soy bean and in cottonseed, but here we have to solve the problem of transportation and of supplying these substitutes at a cost sufficiently low to permit of their being used for food for cattle As to the third method of stretching our wheat supply, the use of mixed flours, we shall first have to have our law forbidding the sale of mixed flours abrogated The grains that may be used in mixed flours are rice, corn, rye and barley Rice, corn and barley cannot be used satisfactorily in proportions larger than 10 per cent, and there are many technical difficulties in the making of edible breads from these mixtures, but wheat may be mixed with 25 per cent rye flour, and will make a bread which can scarcely be distinguished from pure wheat bread By suspending our law and using this mixture, fully 30 per cent of our wheat supply might be saved A serious objection to the extraction of high percentages of whole wheat for flour is that such flours do not keep sufficiently long to permit of their sale and distribution, and hence would involve great losses from decomposition From the point of view of price, the farmer has for his present wheat supply received $1.30 a bushel, on this basis flour should be selling for $7 25 a barrel, instead of the present price of $15

The second great essential is the maintenance of a normal milk supply Here Germany made her second great mistake The German food commission fixed a maximum price on milk, the farmer found that it was more profitable to slaughter his cattle for beef, and so 1,250,000 cattle were killed and the milk ration of Germany was reduced There is no use in trying to make anything cheap in war time, and there is no use in expecting altruism from the farmer An allowance of about 400 c c. of milk daily per individual is a figure that must be maintained We are dependent on the milch cow for butter, beef cattle and swine may be slaughtered, but the milch cow must be preserved It might be well to adapt Dr Graham's slogan, "No housewife should buy 1 pound of beef until she has bought 3 quarts of milk" It is essential that the milk supply of France be not only maintained but that it be increased, and it is up to us to do it

In discussing the problem of waste, I should like to speak of the economy of the French women, and I wish to urge American women to emulate their ways In France the housewife saves even the scraps of vegetables that cannot be used, these are collected, dried, and used as food for cattle In Germany, green vegetables that cannot be carried over to the next week are collected, dried and also fed to cattle. We must be liberal in our price to the producer The effort to regulate the price to the buyer has been of little avail People object to extreme control, and again we meet the racial and class psychology If we fail to meet the problem of the food supply, we fail to fulfil our part in our world relations

DISCUSSION

Hon James W Gerard, New York I wish to confirm what Dr Taylor has said of the necessity of taking into consideration the dietary customs of a people As a protection to the food supply the card system was instituted in Germany early in the war, but it did not prove very effective. For a long period ducks, geese, chickens and turkeys were not on the card and the rich were able to obtain these until the supply was exhausted. The problem of food supply has been greatly complicated by the fact that we are feeding great numbers of people in Belgium and France, and by the action of Argentina in placing an embargo on wheat. In regard to the ration and the method of distribution and the hardships the people have undergone in some sections the Germans seized the lands of the farmers and allowed the farmer only 10 square yards of his own land on which to raise potatoes, while the remainder was confiscated and tilled for the German army. To get laborers to till this land they had forcibly deported French women. When the story of Poland is written it will reveal horrors of suffering and starvation unsurpassed in the pages of human history. An attempt has been made to send food to Poland, but it was found that all was seized by the German army, and no agreement was reached whereby Germany would permit food to be sent into Poland. With reference to the question of a maximum price on articles of food I feel that if it was not successful in a country like Germany where the people are disciplined to submission, it certainly would not be effective in a country like ours where the people have not learned discipline. Fixing prices will also have the deleterious effect of limiting production, so that it seems that our main attack in handling the food problem should be along the lines of preventing waste. In considering the question of diet many have expressed the fear that the restrictions suggested will have the effect of producing tuberculosis. In Germany there has been no material increase in tuberculosis, on the other hand, there was a great increase of tuberculosis in France. One reason for this is that workers in all lines of social service work are needed in France. There has been no material increase in the infant death rate in Germany during the war, and this is because of the great number of social workers who are going about teaching people not only how to feed infants but also how to keep house. This is not done to the same extent in France, there is not a health department in any French city as efficient as ours. In considering the problem of waste, it seems that in this country the credit system and the use of the telephone were largely responsible for the high prices. The people here will not resort to a central market or carry a market basket.

Graham Lusk, New York: Today the men of England, Germany and other warring nations are tightening their belts. This does not mean that they are dying of starvation. Magnus Levy has shown that a man may lose 30 per cent. of his weight and reduce his intake of food 44 per cent. and still survive. I myself know of a woman whose weight was reduced from 136 to 71 pounds and she was taking but 40 per cent. of the food she originally took and was getting on fairly well. These persons were at rest. Reasoned coldly from such facts as these it might be said that we may starve our women, our children and our old people and one may even starve himself, but the man doing work requires an extra amount of food. According to the statistics of life insurance companies, a loss of 10 pounds from the average weight of a man 55 years of aged would result in an increase of his value as a life insurance risk. Furthermore, the loss of that 10 pounds would mean that it would require less food to furnish energy to support and propel him than when he is carrying excessive weight. The man doing work needs food fuel. Meat is needed only for repair, and we could get along very well on half the amount we are now eating. We could destroy the cattle not needed for milk and we could put roast beef in the same category with canvas-back duck and serve it with champagne without serious consequences, but we must maintain our milk supply. We have taken our men from the farms and put them into munition factories and shipyards and we are having them do the 'goose-step'; it is calculated that for the latter purpose it requires 4 000 calories a day for each man. Now, how are we to produce this absolutely necessary fuel food? The farmer has no guarantee that he will be able to get men to help him harvest his crop or that he will get a fair price for his produce. We must give bounties to men to go on the farms. Food fuel is the basis of everything. We need it for the human machines not only in this country but also in England and France. To produce this food, all political chicanery and the united power of an intelligent people are required, two things almost impossible to get in this country. The question is whether we are competent to perform the task of feeding the world or whether we are going to be, the successful accomplishment of this task is the only factor that will save the world in the present situation.

C.-E. A. Winslow, New Haven, Conn.: War has always brought in its train pestilence and famine. Pestilence seems to have been quite effectually controlled in the present war, famine is the problem now confronting us. A popular writer has recently said that the United States is facing a food stringency such as it has not experienced since the first winter at Plymouth. The shortage of food may be met in two ways, either by increasing the production, or also in part in the way that the problem of pestilence has been solved, by scientific advances. As an illustration, a large baking firm found that it was operating more successfully in one city than in another. Investigation showed that in the two cities the same yeast and same flour were being used, the only difference was in the water. The water used in the city that was showing the more successful results was rich in certain mineral salts, and the use of that water saved half the value of the yeast and 2 per cent of the flour. Much may be done by the intelligent selection of foods and the avoidance of waste, but in the application of this advice we have the psychologic factor with which to contend. Oleomargarin is a perfectly satisfactory substitute for butter, but it is difficult to overcome the prejudices of people and get them to use it. We have also on our coasts an unused fish supply. The problem we have before us is to change the habits of the people, and here we can draw a lesson from that other campaign against disease. Having obtained the scientific knowledge, the problem is how to apply it. The same kind of a systematic campaign of education that has been carried on against disease must be instituted in order to carry the knowledge we have of foods into the homes. The machinery for this systematic education we already have in our health department, nursing forces and visiting housekeepers. If we adopt such a system of education we shall reap a rich benefit, not only during the war but also in the more distant future. We at Yale have particularly felt the reality of war as we have seen our boys go to the front. We have seen the careless boy with his college shuffle leave the moving picture shows and the cafes and in a brief space of time become a well-knit man, serious in mind and demeanor. Our whole country must go through the same experience, it too must learn what discipline means. We must learn to forego doing things simply because we like to do them, and learn the lesson of cooperation for the good of our fellows. This is the lesson that we as a nation must learn if we are going to grow up and "do our bit" in the struggle before us.

Dr. Haven Emerson, New York: The health department has made some small contributions to the solution of the food problem. A year ago, when we passed the ordinance permitting the use of horse flesh as food, we made it possible for many of the poor of New York to keep the soup-pot boiling during the past winter who otherwise could not have done so. We have been instrumental in having legislation passed that permits the sale of skimmed milk in this city. This milk is as free from bacteria and other impurities as any of the other grades of milk sold in this city. A matter that calls for correction is the loss of food through lack of proper facilities for transportation. Trainloads of fruits, vegetables and nuts arrive here unfit for human consumption. Provision should be made for drying such foods and using them for food for cattle. The Barren Island garbage incineration plant, which formerly ran all day and often far into the night, now usually completes its work by 3 p. m. There is a reduction of 25 per cent. in the amount of garbage handled by the garbage plant. Kitchens have been attached to the milk stations where instruction in home economics and the use of substitute foods will be given. The tuberculosis clinics and other clinics and health department offices are being employed as education centers to teach food economy These are the contributions the health department is *making in* order that we may be generous *and not stingy* with our national food supply

---

AMERICAN ASSOCIATION OF IMMUNOLOGISTS

Fourth Annual Meeting, held at New York, April 6 7, 1917

(Continued from page 1504)

Studies on the Isolation of Streptococci from Rabbits

Dr E T Tsen In investigating the relation of streptococci to poliomyelitis, we made cultures of the brains of twenty-three out of fifty-four rabbits studied Five of these were inoculated with glycerinized poliomyelitis virus from monkeys, one was inoculated with brain emulsion of a rabbit that died after an inoculation with poliomyelitis virus, two were inoculated with streptococci from monkeys, two were inoculated with streptococci from rabbits that died after inoculations with poliomyelitis virus, one was inoculated with streptococci from a rabbit that died after an inoculation with streptococci, two were syphilitic, and nine were normal From the brains of all that were inoculated with poliomyelitis virus, streptococci or *Spirochaeta pallida,* we have isolated streptococci and, sometimes, other gram-positive diplococci Of the nine normal rabbits, we got the same organisms from the brains of six Rosenow's culture methods were used It was proved that in healthy, normal individuals, streptococci were sometimes found, and it was potentially, not actually, sterile Streptococci had not been found in the brain of such because they had not been looked for In tubes grown from sick rabbits, however, organisms were often present in all the tubes, while in the normal rabbits, a growth occurred in one or two out of sixteen tubes Flexner and Noguchi, and Rosenow found these organisms, but interpreted the findings differently, Rosenow regarded them as specific causative agents in many diseases Flexner and Noguchi regarded them as contaminations Our interpretation differs from both We regard these organisms as saprophytes, which, under lowered conditions of resistance, acquire power to invade the tissues extensively

DISCUSSION

Dr J A Kolmer Philadelphia In the recent epidemic of poliomyelitis in Philadelphia, Drs Freese, Brown and myself found streptococci and diplococci widely dessimated in the tissues after death—in the brain and cord, and also in the internal organs They probably are of a low grade of virulence, and occur symbiotically with the true microparasite, they also play a certain role in the pathogenesis of poliomyelitis, as streptococci do in scarlet fever

Dr Hans Zinsser, New York I should like to support Dr Tsen's remarks I do not think that he meant to say that these organisms are purely saprophytic, but that they are not the etiologic factor in the disease They probably invade the tissues of a sick animal more readily than they do those of a healthy one Whether or not they cause symptoms, I am unable to say

Further Observations on Local Resistance to Syphilis in Reinoculated Rabbits

Drs Hans Zinsser, J G Hopkins and M McBurney, New York In our first series of seventeen reinoculated rabbits, some doubtful nodules were felt, and in three cases spirochetes could be demonstrated by puncture One rabbit developed frank lesions containing active spirochetes, and reinoculation was performed less than two weeks after the healing of the original lesion In the other animals the interval was from three weeks to one year They were inoculated and reinoculated in groups of three or four, and normal rabbits were inoculated at the same time as controls The same material was used and the controls were proved positive by puncture Many other normal rabbits were inoculated at the same time Lesions were present in 100 per cent In reinoculation, the second lesion differed in type and site from the first Successful reinoculation seemed to prove that the resistance was purely local In further experiments, one testicle was inoculated and the normal testicle was used for control In two rabbits, inoculated in one testicle and reinoculated in both, local resistance to infection seemed to have developed on both sides Only lesions showing numerous active spirochetes were used for inoculation

DISCUSSION

Dr Richard Weil, New York It seems to be a remarkable phenomenon if it indicates a localized specific immunity I do not question the occurrence of this phenomenon, it is in keeping with what we know of localized immunity in variola, for example, Again, in making repeated serum injections one sometimes finds that the sites which had recieved the earlier injection are the ones which light up when subsequent injections are made at a distance This seems to show excess of antibody at the site of original infection

Dr Hans Zinsser, New York This was the first evidence we had of traceable immunity in rabbits You can reinoculate rabbits on the opposite side and get a positive result We were unable to demonstrate any antibodies against spirochetes in the serum of the syphilitic animals or human beings Culture spirochetes are antigenically quite different organisms, and have nothing in common with virulent spirochetes, which seem to be entirely unsusceptible to serum effects Syphilitic serum does agglutinate culture spirochetes slightly, but there is not enough difference between normal and syphilitic serum in this respect to warrant diagnostic use of the reaction The absence of circulating antibodies in syphilitic individuals renders our discovery of a purely localized resistance all the more interesting Kraus' work with variola was along similar lines He found that the skin as a whole became immune We do not assert that this is resistance in an active *sense,* but merely that there is no visible lesion It may be an *Allergie* and the tissues no longer react to invasion Spirochetes may pass through without rousing a reaction, as suggested by Neisser There is an inability to react on the part of cells which have once reacted directly to the virus

Desensitization of Guinea-Pigs Sensitized to Dog's Serum

Dr A F Coca, New York One of the most constant characteristics of the anaphylactic state is the phenomenon of desensitization which may generally be produced in sensitized animals by the intravenous injection of sublethal doses of the respective antigen, or by intraperitoneal or subcutaneous injection of multiples of the intravenous lethal dose I have deduced the following conclusions 1 Guinea-pigs, actively sensitized to dog's serum, cannot be desensitized by (*a*) subcutaneous injections of large amounts (fifteen lethal doses) of the dog's serum, (*b*) intraperitoneal injections of one-third a lethal dose, or (*c*) the intravenous injection of one-half a lethal dose of the dog's serum 2 The desensitization, however, can be accomplished by slow intravenous injection (fifteen minutes) of two lethal doses diluted to 2 c c with physiologic sodium chlorid solution

DISCUSSION

Dr Hans Zinsser, New York Is there any difference between this and the method of Friedberger of slow injection for the avoidance of anaphylactic shock?

Dr A F Coca, New York The method I employed for producing the desensitization is not original It was described by Friedberger I am merely pointing out that it is the only available method of desensitizing guinea pigs that have been actively sensitized to dog's serum

Studies on Reducing Action by Bacteria

Dr. B Aranowitz The following points can be *noted* The reducing enzyme is not secreted by the cell The action of the enzyme is independent of the life of the cell It is destroyed in from fifteen to thirty minutes at 60 C It is *held* back by the Berkefeld filter Chemicals, as saponin *and* sodium taurocholate, do not accelerate secretion of the enzyme though making the cell membrane more transfusible Grinding, freezing with thawing, and elimination of bacterial remnants do not isolate the enzyme Autolytic processes *and* digestion in 2 per cent trypsin emulsion in 0 05 sodium carbonate solution does not release the enzyme from the cell protoplasm Bacteriolytic action of immune serum and complement prove of value in separating enzyme from cell body Proteins of the medium are not necessary for reducing activities of bacteria

Drs W H Manwaring Sanford University California Y Kusama and A R Meinhard Our analyses of the anaphylactic and immune reactions by means of perfusion experiments with isolated rabbit and guinea-pig tissues have shown that the hypersensitive and immune humoral and cellular factors may coexist in the bodies of anaphylactic and immune animals in the following conditions cellular anaphylaxis and approximately normal blood conditions cellular anaphylaxis and humoral anaphylaxis, cellular anaphylaxis and humoral immunity, cellular immunity and humoral anaphylaxis, cellular immunity and humoral immunity and cellular anaphylaxis and cellular immunity It will probably be necessary to reduce anaphylatic and immune reactions to lower physiologic terms than those at present employed before hoping to harmonize these observations with current serologic theories

(*To be continued*)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Diseases of Children, Chicago

May XIII No 5

1 Nonprotein Nitrogen of Blood in Atrophic Infants L D Minsk and L W Sauer Chicago —p 397
2 Nitrogen Partition in Urine of Normal Children M R Johnston and B S Veeder St. Louis —p 404
3 Gestation vs Stage of Lactation as Factors Causing Abnormal Composition of Cow s Milk L S Palmer and C H Eckles Columbia Mo —p 413
4 *Bacteriology of Urine in Children with Vulvovaginitis Report of Two Cases of Gonococcus Cystitis A. B Schwartz, Milwaukee Wis —p 420
5 Case of Congenital Endocarditis H E Tuley and J W Moore Louisville Ky —p 426

4 Bacteriology of Urine in Gonococcus Vulvovaginitis—In eighteen unselected patients with chronic gonococcus vulvovaginitis carefully catheterized specimens of urine showed a comparative absence of bacteria The majority of the organisms encountered were either gram-positive cocci or diphtheriod bacilli In most instances these were in such small numbers that they could easily be accidental contaminations from the urethra. The second portion of the urine, representing the bladder flora was shown to be as free from infecting organisms as was demonstrated in a previous series of normals The occurrence of vulvovaginitis did not increase the tendency to contamination of the bladder According to Schwartz gonococcus cystitis may follow previous infections of the bladder by *Bacillus coli* in patients with vulvovaginitis

American Journal of Medical Sciences, Philadelphia

April CLIII No 4

6 *Disturbance of Law of Contrary Innervation as Pathogenetic Factor in Diseases of Bile Ducts and Gallbladder S J Meltzer New York.—p 469
7 *Diagnosis of Gallbladder Disease. W F Cheney San Francisco —p 477
8 Medical Aspects and Diagnosis of Gallbladder Disease. D Riesman Philadelphia.—p 492
9 *Gallbladder Disease Progressive Inflammation Its Treatment Cholecystectomy R. S Fowler Brooklyn —p 497
10 Pericardiotomy for Suppurative Pericarditis Following Pneumonia Report of Case and Review of Literature C N B Camac and E. H Pool New York.—p 509
11 *Acute Pericarditis. W H. Robey Jr Boston —p 529
12 Nonsurgical Treatment of Gastric Ulcer F Smithies Chicago —p 547
13 Operative Treatment of Hydrocephalus Preliminary Report of Forty One Patients W Sharpe New York —p 563
14 Effect of Nuclein Injection on Leukocytes of Dogs H Fox and F B Lynch Philadelphia —p 571
15 Limits of Bleeding Considered from Clinical Standpoint. B M. Bernheim Baltimore.—p 575
16 Main Factors Affecting Intensity of Sounds as They Pass from Interior of Lungs to Periphery of Chest C M Montgomery, Philadelphia —p 583

6 Diseases of Bile Ducts and Gallbladder—Meltzer states that the law of contrary innervation is manifest in all functions of the animal body, and he believes that a disturbance of this law is a factor of more or less importance in the pathogenesis of many disorders and diseases of the animal body The gallbladder, for instance, is well provided with muscle fibers, the contraction of which will free the gallbladder from its fluid contents Oddi described some thirty years ago that the papilla of Vater is provided with circular muscle fibers which by their contraction close up the common duct This contraction is strong enough to resist a pressure much higher than that which usually obtains in the bile ducts It is clear that the muscle fibers of the gallbladder and those of the papilla are antagonists During the storage of bile the muscle fibers in the papilla are contracted and those of the gallbladder are inhibited, during the discharge the gallbladder contracts and Oddi's muscle is relaxed, the bile has then no other way out but into the duodenum Stimulation of the peripheral end of the splanchnic nerves causes simultaneously a contraction of the gallbladder and an inhibition of the tonus of Oddi's muscle The vagus on the other hand, seems to contain motor fibers for the sphincter of the common duct and inhibitory nerve fibers for the gallbladder The physiologic discontinuous character of the flow of bile into the duodenum is regulated by a reflex mechanism, dominated by the law of contrary innervation, the integrity of the gallbladder is an important part in this reflex mechanism, the discharge of bile can be greatly curtailed by the absence or a restriction of the discharge of chyme from the stomach into the duodenum and the discharge of bile through the papilla of Vater into the duodenum is greatly enhanced by the presence in the lumen of the latter of peptone or albumosis

The physiologic storage of bile may be converted into a pathologic stasis and thus become the cause of a more or less serious ailment of some part of the biliary system Psychical influences and the influences of the partaking of food and of the character of the food which is partaken may prove to be pathogenetic factors in the formation of biliary diseases Simple infrequent feedings say the partaking of only one meal or even two meals a day, may very gradually finally lead to pathologic consequences The accumulation of the bile in the gallbladder and in the ducts for longer periods, and the continued repetition of these periods may gradually reduce the normal resisting power of the corresponding mucous membranes which may become a serious pathogenetic factor in case the individual has passed or is passing through an infectious disease. Even in health it is advisable to partake of comparatively frequent meals, although they need not consist of large quantities and the meal contain foods which readily send peptone and albumoses into the duodenum

7 Diagnosis of Gallbladder Disease—Painstaking efforts in eliciting an orderly and complete history not only of the patient s complaint but of all other incidents in the previous health, careful and intelligent use of the eyes, the finger tips and the ears in acquiring information about the patient, and good judgment in sifting and interpreting the facts so obtained Cheney claims are still the methods that surpass all others in diagnosis The newer laboratory and Roentgen-ray aids are exceedingly valuable and never to be overlooked but not to be relied on as short cuts and labor saving devices to supersede the other means described as seems to be too much the tendency in this day

9 Treatment of Gallbladder Disease—Fowler believes that it is logical to assume that cholecystectomy is indicated in all diseases of the gallbladder whether causing mild or severe symptoms The operation is not done for the purpose of removing stones for these may or may not be present, but for the purpose of removing tissue diseased as a result of progressive inflammation Just as soon as this inflammation has reached a point where the efficiency of the gallbladder is impaired and symptoms result, just so soon should the gallbladder be removed Whether gallstones are present or not is immaterial made from the history and the blood picture, the examination of the gastro-intestinal tract being negative The duodenal contents in both cases did not show a pleiochromia One of these patients has since died in the fourth relapse In two cases, with negative urine findings, the diagnosis of chronic interstitial nephritis was made on the blood pressures and the phenolphthalein output In three cases a careful examination did not reveal causation of the anemia Eleven of the twenty-five patients showed repeatedly a 4 plus Wassermann reaction, and careful examination did not reveal any other cause for the anemia The anemia was not of the splenic type, the spleen was not enlarged Most of these patients showed rather normal looking red blood cells and the hemoglobin usually a strong one index

Journal of Experimental Medicine, Baltimore

May, XXV No 5

66 *Experiments on Role of Lymphoid Tissue in Resistance to Experimental Tuberculosis in Mice Effect of Cancer Immunity on Resistance to Tuberculosis H D Taylor and J B Murphy, New York —p 609

67 *Transplantation of Spleen Tissue into Subcutaneous Fascia of Abdomen in Rabbits O T Manley and D Marine, Cleveland —p 619

68 *Production of Antipneumococcus Serums A B Wadsworth and M B Kirkbride, Albany, N Y —p 629

69 Experimental Studies on Lymphocytes Reactions of Lymphocytes under Various Experimental Conditions A M Pappenheimer, New York —p 633

70 *Normal Fate of Erythrocytes Findings in Healthy Animals P Rous and O H Robertson, New York —p 651

71 *Id Blood Destruction in Plethoric Animals and in Animals with Simple Anemia O H Robertson and P Rous, New York —p 665

72 Elimination of Iron and Its Distribution in Liver and Spleen in Experimental Anemia H Dubin and R M Pearce, Philadelphia —p 675

73 *Study of Acidosis, Blood Urea and Plasma Chlorids in Uranium Nephritis in Dog, and of Protective Action of Sodium Bicarbonate K Goto, Philadelphia —p 693

74 Cicatrization of Wounds Mathematical Study of Extrapolation Formula and Curve of Cicatrization P L Du Nouy, France —p 721

75 Digitalized Dog's Heart as Affected by Amyl Nitrite or Atropin, Studied Electrocardiographically J T Halsey, New York —p 729

76 *Spirocheta Icterohemorrhagia in American Wild Rats and Its Relation to Japanese and European Strains H Noguchi, New York —p 755

66 **Cancer Immunity on Resistance to Tuberculosis**—That lymphocytosis might be a factor in causing greater resistance to infection displayed by splenectomized animals is confirmed by experiments made by Taylor and Murphy Mice splenectomized and then exposed to repeated small doses of Roentgen ray, which had been demonstrated to affect primarily the lymphoid organs, proved to be more susceptible, instead of more resistant to infection than were either normal animals or animals splenectomized alone Intact Roentgen-rayed mice were likewise highly susceptible to infection with the bovine tubercle bacillus Morton has observed also that the Roentgen-rayed guinea-pig is more susceptible to infection with the human type of the tubercle bacillus than is the normal animal The present communication deals with the influence of a pronounced lymphocytosis induced by other means than splenectomy on the resistance of the mouse to tuberculous infection Mice first immunized to, and then inoculated with, a transplantable mouse cancer exhibit a greater resistance to bovine tuberculosis than do normal animals On the other hand, while animals ineffectively immunized against cancer show a definite lymphoid reaction in the blood, it is less marked than when the immunity is perfect Four mice of this kind outlived the controls but succumbed earlier than the completely immune ones

67 **Transplantation of Spleen Tissue**—Not one instance of permanent homotransplantation or autotransplantation of the spleen, or of the probably closely related splenolymph and hemolymph glands is on record Spleen autotransplants with considerable difficulty, as compared with thyroid, parathyroid, ovary or suprarenal cortex This may be due to its complex anatomic structure An instance of a permanent autotransplant has been observed by Manley and Marine. None of their attempts to homotransplant were successful beyond the usual taking and persistence for two or three weeks, common to all homografts The successful permanent subcutaneous autotransplantation had all the morphologic characteristics of a fully differentiated and functionally active spleen

68 **Production of Antipneumococcus Serums**—A horse immunized by Wadsworth and Kirkbride with Type III (*Pneumococcus mucosus*) developed serum having a slight degree of protection for mice against the corresponding organisms This serum was sufficiently potent, however, to cause prompt and complete agglutination when combined with fresh, untreated, homologous organisms, thus avoiding the preliminary treatment to remove the capsule which has previously been held necessary As a diagnostic aid in the differentiation of pneumococcus strains, the serum has proved of distinct value

70 **Normal Fate of Erythrocytes**—The phagocytosis of red corpuscles, while frequent in the normal dog, rat and guinea-pig, according to Rous and Robertson, is slight in man, the rhesus monkey, and many rabbits By a special method, it has proved possible to search the body, organ by organ, and the circulating blood also, for disintegrating red corpuscles Shadows of red cells are not present anywhere, nor are hemolyzing red cells found A hemolytic process, in the ordinary sense of the term, can scarcely play an important part in normal blood destruction Instead, it is certain that some red corpuscles, at least, are destroyed in another way, namely, by fragmentation Normal blood regularly contains small numbers of fragmentation forms—microcytes and poikilocytes—and accumulations of them are regularly present in the spleen, but are found only inconstantly in the other organs The fragments are in evident process of further subdivision They occur not only in species in which phagocytosis as a means of cell destruction is negligible (cats), but also in animals in which it is an important process (dogs, some rabbits)

71 **Blood Destruction in Plethora and Simple Anemia**—Robertson and Rous state that the increased destruction of red cells in animals rendered plethoric by transfusion takes place predominantly by a fragmentation of the corpuscles without loss of hemoglobin The microcytes and poikilocytes observed in animals with a severe anemia due to hemorrhage are not put forth as such by the bone marrow but are portions of cells fragmented while circulating The cells thus fragmented are for the most part those new formed to meet the exigencies of the situation Such cells are in large part unable to withstand the wear and tear of function There results a vicious circle The anemia renders the bone marrow unable to put forth proper cells, and those it does produce are soon destroyed, thus prolonging the condition A similar state of affairs probably exists in many human anemias The occurrence of large accumulations of microcytes and poikilocytes in the spleen of anemic and plethoric animals indicates that the organ exercises some important function in connection with these forms The same is true of normal animals, for the findings in them are similar, though less striking The normal fate of red corpuscles, in those species in which phagocytosis is negligible, is to be fragmented one by one, while still circulating, to a fine, hemoglobin containing dust The cell fragments are rapidly removed from the blood but their ultimate fate remains to be determined The facts indicate that they are removed from the blood by the spleen, and under exceptional conditions, by the bone marrow

73 **Acidosis in Uranium Nephritis**—The presence of an acidosis in dogs with experimental uranium nephritis, Goto says is demonstrable by the Van Slyke-Stillman-Cullen method and that of Marriott. It is detected more readily by the former method This acidosis is associated with increase in the blood urea and plasma chlorids and with the appearance of albumin and casts in the urine The oral administration of sodium bicarbonate diminishes the acidosis, the increase in plasma chlorids, the amount of albumin and casts in the urine, and, to a lesser degree, the increase in the blood urea following the administration of uranium It also diminishes the severity of the changes produced by uranium

in the kidneys The oral administration of sodium bicarbonate to normal dogs raises the carbon dioxid content of the plasma, as determined by the Van-Slyke-Stillman-Cullen method

76 **Spirochete Icterohemorrhagia in Wild Rats** —The principal points brought out by Noguchi are the following 1 Wild rats captured in this country carry in their kidneys a spirochete which possesses the morphologic and pathogenic properties characteristic of *Spirochaeta icterohemorrhagica* discovered by Inada in the Japanese form of infectious jaundice 2 Cultures of the American, Belgian and Japanese strains of the spirochete were obtained by a special technic described the first two strains having been cultivated artificially for the first time 3 Animals actively immunized against the Japanese strain resist inoculation, not only of the same strain but also of the Belgian and American strains The Belgian strain produces immunity equally effective against all three strains Experiments to ascertain whether the immunity afforded by the American strain also protects against the Japanese and Belgian strains are in progress These findings warrant the conclusion that the spirochetes designated here as the Japanese, Belgian and American strains are probably identical On account of its distinctive features a new genus *Leptospira* has been suggested as the designation of this organism

Medical Record

May 5 XCI No 18

77 Congenital Cerebrocerebellar Diplegics Their Training Treatment L P Clark New York —p 751
78 Surgical vs Tuberculin Treatment of Renal Tuberculosis L. Buerger New York —p 760
79 Report of Thirty Five Cases of Perisinus and Extradural Mastoid Abscess H B Blackwell New York.—p 763
80 Obstruction of Appendix. W H Barber New York —p 766
81 Home Convalescence. F Brush White Plains —p 768

Mental Hygiene, Concord, N H

April I No 2

82 Types of Delinquent Careers B Glueck New York —p 171
83 Efficiency and Inefficiency—Problem in Medicine. P Bailey New York —p 196
84 Standardized Fields of Inquiry for Clinical Studies of Border line Defectives. W E Fernald Waverly Mass —p 211
85 Educational Methods and Fundamental Causes of Dependency C M Campbell Baltimore —p 235
86 Some Criteria for Evaluation of Mental Tests and Test Series F Mateer Waverly Mass —p 241
87 How May We Discover Children Who Need Special Care? R M Yerkes Boston —p 252
88 Feeblemindedness as Seen in Court V V Anderson Boston —p 260
89 Community Value of Outpatient Department of Hospital for Insane J B MacDonald Hathorne Mass —p 266
90 Subsidizing Mental Deficiency— Pauper Idiot Act of Kentucky T H Haines Columbus —p 274
91 Care and Treatment of Insane in County Institutions of Pennsylvania. W C Sandy Columbia S C —p 279

Modern Hospital, St. Louis

April VIII No 4

92 Model Hospital Established and Managed by Chinese. W Lien Teh —p 241
93 Hospital Work in Island of Porto Rico E. R Hildreth San Juan P R —p 245
94 How a Real Hospital Started and Grew L. O Wight New York —p 247
95 Story of Institutional Library M H Burgoyne White Plains, N Y —p 251
96 Skim Milk as Food J P Street New Haven Conn —p 253
97 Standardization of Hospitals Introduction and Classification. J A Hornsby Chicago —p 256
98 Architecture and Equipment of Jordan Hospital Plymouth Mass C G Mixter and H F Kellogg Boston —p 258
99 Hospital Organization in Rural Pennsylvania H L. Foss, Danville Pa —p 275
100 What Sisters Should Contribute to Team Work M Esperance Minneapolis —p 276
101 Diagnosis of Heart Cases A. Bacon and F M Smith, Chicago —p 279

New Jersey Medical Society Journal, Orange

April XIV No 4

102 Tonsils. C C Coakley, New York.—p 137
103 Cardiac Remedies P H Markley Camden.—p 141
104 Sleep and Proper and Improper Methods of Sleeping in Relation to Health and Disease. J A Maclay, Paterson.—p 144
105 Infantile Paralysis M Frank, Bayonne —p 147
106 Case of Myocardial Exhaustion Producing Angina Pectoris D W Scanlan, Atlantic City —p 152

New Orleans Medical and Surgical Journal

May LXIX No 11

107 Symptoms of Measles S F Braud, New Orleans —p 739
108 Ear Nose and Throat Complications of Measles H Dupuy, New Orleans —p 741
109 Ocular Complications of Measles C A Bahn, New Orleans —p 745
110 *D Espine Sign Valuable Aid in Diagnosis of Pulmonary and Tracheobronchial Glandular Tuberculosis in Childhood C J Bloom New Orleans —p 748

110 **D'Espine Sign in Diagnosis of Tuberculosis** —Bloom reports seventeen cases, in which the "d'Espine sign" was positive, and the diagnosis made before these respective cases were diagnosed as such by Roentgen ray The tuberculin reaction proved positive in three of the seventeen cases

New York Medical Journal

May 5 CV No 18

111 United States Naval Hospital and Medical School R C Ransdell Washington D C —p 817
112 Roentgen Findings in Upper Right Abdomen A J Quimby and W A Quimby New York —p 821
113 Stenosis and Stricture of Ureter L Buerger New York —p 826
114 Study of Drug Action T J Mays, Philadelphia —p 832
115 Is Epilepsy Bacterial Infection? J F Munson Sonyea —p 836
116 Warning About Rickets B Robinson, New York.—p 837
117 Some Considerations in Diagnosis of Gastro Intestinal Diseases H Weinstein New York —p 838

New York State Journal of Medicine

April XVII No 4

118 Expert Medical Testimony in Criminal Cases P Bailey New York —p 161
119 Cell Count of Spinal Fluids J Roby, Rochester —p 166
120 Extraction of Cataract from Vitreous E S Thomson, New York.—p 169
121 Health Center Field Work A C Schaefer Buffalo —p 176
122 Atrophic Vascular Cirrhosis of Liver with Ascites W L. Duffield, Brooklyn —p 178
123 Medical Gynecology R G Loop, Elmira —p 180
124 Successful County Medical Society W G Fish Ithaca —p 183
125 Economic Foundations for Health B C Marsh New York —p 184
126 Importance of Diagnosis to Vital Statistics with Special Reference to Cancer Problem J S Lewis Buffalo —p 187

Oklahoma State Medical Association Journal, Muskogee

April X No 4

127 Prevalence of Pellagra in Oklahoma J L Day Norman —p 131
128 Diagnosis and Symptomatology of Pellagra C R. Hume Anadarko —p 134
129 Management and Treatment of Pellagra J C Watkins Checotah —p 136
130 Infections of Childhood W M Sanger, Oklahoma City —p 139
131 Infant Feeding M B Springer Tulsa.—p 143
132 Artificial Feeding of Normal Infants C V Rice Muskogee —p 146
133 Improvement of Race and National Vitality M A Warhurst Sylvian —p 149
134 Gas Infection. G D McLean Oklahoma City —p 152

Ophthalmology, Seattle

April XIII No 3

135 Early History of Ophthalmology in Chicago C A Wood Chicago —p 397
136 Smith Indian Cataract Operation A. S Green and L D Green, San Francisco —p 406
137 Treatment of Cataract J W Millette Dayton Ohio —p 415
138 Old and New Cataract Operation M Corry and H Shanker Delhi India —p 420
139 New Operation for Ectropion D W White and P C White Tulsa Okla —p 425
140 Internal Secretory System and Eye R. S Lamb, Washington, D C —p 434
141 Practical Value and Limitations of Tonometer E. Jackson, Denver —p 437
142 Art of Refraction H S Gradle Chicago —p 447
143 Dumb Bell Keratitis L H Buxton Oklahoma City —p 450
144 Clinical Study of Three Cases of Sarcoma of Choroid and Ciliary Body H. H McGuire Winchester Va —p 454

South Carolina Medical Association Journal, Greenville

April XIII No 4

145 How to Increase Individual and Collective Efficiency of Medical Profession of South Carolina C B Earle, Greenville.—p 498.
146 Vaginal Cesarean Section G F Wilson Charleston —p 501
147 Study of Medicine W F R. Phillips Charleston —p 504

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Journal of Children's Diseases, London

January March XIV, Nos 157 159

1 Malformation of Esophagus E Cautley —p 1
2 *Infective Theory of Acute Leukemia G Ward —p 10
3 *Isolated Nasal Diphtheria J D Rolleston —p 21
4 Cerebral Diplegia with Abnormal Flexibility (Atony or Hypotonia) of Ankle Joints F P Weber —p 31
5 Case of Cyclic Vomiting with Acetonemia (Acidosis) Nondiabetic Acetonuria and Diaceturia F P Weber —p 33
6 Case of Heart Failure During Operation for Removal of Tonsils and Adenoids, Heart Massage Through Abdominal Incision, Recovery W M Mollison —p 42
7 Retrospect of Otology M Yearsley —p 47

2 **Infective Theory of Acute Leukemia** —The evidence presented by Ward is almost entirely against the infective nature of leukemia, the established facts being (1) There is a congenital form of leukemia which occurs in children whose parents are not leukemic, (2) leukemic parents have never been known to transmit the disease to the new-born child, (3) instances in which actual infection of one person by another might seem to have occurred are very few, although not necessarily devoid of significance, (4) in having a marked preference for a particular sex and age, leukemia differs from the infective class of diseases, and resembles the metabolic diseases and cancers

3 **Isolated Nasal Diphtheria** —Among 3,000 cases of diphtheria under Rolleston's care there were only fifty-five cases or 1 5 per cent examples of isolated nasal diphtheria that is, diphtheria starting in the nose and remaining confined to that site, as compared with 620 cases, or 20 6 per cent., in which nasal diphtheria was associated with diphtheritic angina The diagnosis in each case was confirmed by bacteriologic examination With the exception of four infants who were suffering from congenital syphilis, all the patients had been in good health until the time of their attack of diphtheria None had been recently suffering from scarlet fever or measles which so frequently precede nasal diphtheria

British Medical Journal, London

April 14, I No 2937

8 *Mouth Washes in Health and Disease. H P Goodrich —p 473
9 Treatment of Fractures by Splints. C A Morton —p 475
10 *Recent Results in Serum Treatment of Cerebrospinal Fever A G Robb —p 478
11 Etiology of Dysentery C J Martin and F E Williams —p 479
12 Metastatic Gas Gangrene J N J Hartley —p 481
13 Skin Grafting D G Greenfield —p 482
14 Another Wandering Shrapnel Ball H I Gregory —p 482

April 21, No 2938

15 Wounded as We See Them at Home. W C Allardice —p 501
16 *Metabolic Changes Produced by Allen Treatment of Diabetes Mellitus P J Cammidge.—p 503
17 Variations in Weight of Tuberculous Under Sanatorium Treatment. J H Smith —p 505
18 *Method of Anesthetizing Soldiers W J McCardie —p 508
19 Multiple Severe Injuries from Bomb Explosion, Operation, Recovery N Davidson —p 509
20 Value of Feeding During Operation as Preventive of Surgical Shock H H Brown —p 510
21 Case of Cerebral Abscess of Otic Origin H Bodkin —p 510
22 Treatment of Trench Feet by Subcutaneous Injection of Oxygen H O Smith —p 511

8 **Mouth Washes in Health and Disease** —The experiments made by Goodrich show that a saturated aqueous solution of thymol is a very good antiseptic for ordinary mouth bacteria Boric acid has given disappointing results A saturated solution must act for more than two minutes to be effective and was by no means always satisfactory in five minutes Iodin would obviously not make a satisfactory mouth wash for general use Hypochlorite solutions are not suitable for general use owing to their instability Hydrogen peroxid solutions are too readily reduced to be successful in the hands of an ordinary patient Potassium permanganate, another oxidizing agent and deodorant, is sometimes used as a mouth wash It is by no means ideal, being only a weak antiseptic, and, in addition to staining the teeth, has an unpleasant taste With zinc sulphocarbolate, a 10 per cent. solution, Goodrich never once obtained complete sterility

10 **Serum Treatment of Cerebrospinal Fever** —The most hopeful line of treatment in Robb's opinion is by lumbar puncture, drainage, and the intrathecal injection of carefully prepared polyvalent antimeningitis serum, and the most important factors which make for success are early treatment and sufficient dosage

16 **Allen Treatment of Diabetes Mellitus** —Some 8,000 specimens from over 500 cases of diabetes, including fifty-four treated by Allen's method, have been examined by Cammidge. One of the most striking results has been the frequency with which indications of chronic catarrh of the upper intestinal tract were found (71 per cent) Signs of some interference with the digestive functions of the pancreas were met with in 72 per cent In most of them (67 per cent.) there were also indications that the functions of the liver were being imperfectly carried out, while in 27 per cent the hepatic disturbance was more pronounced, apparently, than the pancreatic Cammidge, therefore, recognizes three types (1) the pancreatic, (2) the hepatic and (3) the pancreohepatic The outlook for patients with a cirrhotic pancreas is fairly good, provided a suitable diet is adopted They are not materially benefited by starvation, and as their digestive powers for all three classes of foodstuffs are defective it is more important to ensure adequate nourishment than to worry over the traces of sugar they generally pass

Cammidge does not look on Allen's fasting treatment as the best for all forms of glycosuria, but considers that it marks a great advance in the available methods, and gives results that can be obtained by no other means in many instances It must be used with judgment, however, and one should always bear in mind that the keynote of the treatment is undernutrition A practical question that sometimes arises is whether a controlled, and may be mild glycosuria with an adequate diet and reasonable enjoyment of life, is not preferable to the theoretical ideal of permanently sugar free urine, which can only be secured by a diet that will not satisfy the pangs of hunger, and requires constant close supervision The answer will depend on circumstances and the temperament of the patient These should be considered carefully before advising the treatment, as once it is begun it must be persevered with, since a return to an ordinary carbohydrate free diet always brings about a rapid increase in the acidosis, with excessive tissue waste and death from diabetic coma

There is more danger of serious acidosis during the starvation of fat than thin diabetics, when acidosis is present the patient should be prepared for starvation by a fat-free protein-poor, diet for several days, an initial increase in the acidosis is to be expected in most cases, but should not put a stop to the treatment unless it assumes threatening proportions When this occurs the fast should be terminated for the time being and the treatment directed to the acidosis A restricted diet and alkaline therapy for a few days will generally serve to control the condition, when a further fast will usually result in improvement in carbohydrate metabolism without increasing the acidosis During the fasting period as much exercise as practicable should be taken, as it shortens the duration of the fast After feeding is commenced the exercise should be continued, short periods of vigorous exercise after meals being preferable to long walks Excessive fatigue should be avoided. Mental occupation is also most desirable and patients should be encouraged to continue, or resume, their ordinary work if possible

18 **E-C Method of Anesthetizing Soldiers** —The best all round mixture would be one in which the respiration and circulation are very slightly stimulated by the addition of a little more ether, thus ensuring safety and counteracting any shock arising from the operation McCardie's idea is to take ether as the standard of safety and so to dilute or modify its action as to obtain some of the advantages of chloroform anesthesia Ether thus modified by chloroform, is said to possess practically the safety of pure ether The author uses 16 parts of ether to 1 of chloroform He terms this mixture "mitigated ether" As a preliminary to the administration of ether, or $E_{16}C_1$, McCardie prefers a few drops of E C_1 to ethyl chlorid For maintenance of anesthesia E_2C_1 or chloroform

are preferable to even "mitigated ether," owing to the prevalence of respiratory irritability among soldiers

Lancet, London

April 21 I No 4886

23 War Surgery of Abdomen C Wallace —p 597
24 *Studies in Wound Infections Question of Bacterial Symbiosis in Wound Infections S R Douglas A Fleming and L Colebrook.—p 604
25 Clinical Types of Subtertian Malaria A W Falconer and A C Anderson —p 607
26 Symptomatology of Paratyphoid Fever J M Fortescue Brickdale. —p 611
27 Improved Method for Estimation of Sugar in Urine and Blood P J Cammidge —p 613

24 **Studies in Wound Infection, Symbiosis**—The experiments described by Douglas and his associates show that the proliferation of *B perfringens* is much more rapid when it is grown in symbiosis with streptococcus, staphylococcus various diphtheroid bacilli, *B proteus, B pyocyaneus* and a coliform bacillus All strains of diphtheroid bacilli, commonly isolated from wounds, were found to be practically equally efficient in stimulating the growth of *B perfringens* Not only were a much larger number of *B perfringens* found in the cultures grown in symbiosis with these various bacilli after a certain period of incubation, but it was also found that an almost infinitely smaller number of *B perfringens* would proliferate under these conditions than when pure cultures were made. When *B perfringens* and streptococci are grown in symbiosis a much more abundant growth of both microbes results These experiments indicate that bacterial symbiosis may play a very important role in wound infections

Medical Journal of Australia, Sydney

March 24 I No 12

28 War Surgery at Front. C MacLaurin.—p 241
29 Milk Curdling Properties of Pancreatic Juice H G Chapman and A. H Moseley —p 243
30 Vasomotor Disturbances in Raynaud s Disease A W F Noyes. —p 247

March 31 No 13

31 Healthy House Building J Nangle.—p 265
32 Prolapse of Female Bladder A. J Nyulasy —p 272

April 7 No 14

33 Developmental Cysts of Ureter and Renal Pelvis in Case of Unilateral Pyelonephritis S H Harris and D A Welsh —p 291

Archives des Maladies du Cœur, etc, Paris

March X No 3 pp 97 144

34 Character of the Heart Murmurs with Congenital Cyanosis (Des caracteres des souffles cardiaques dans la maladie bleue.) L. Bard —p 97
35 *Possibility of a Reflex Arterial Systole. R Wybauw —p 107
36 Successful Extraction of Bullet in Wall of Left Ventricle J Duvergey —p 122

35 **Theories in regard to the Circulation of Blood in the Vessels**—Wybauw recalls that, according to the accepted theory of the circulation, the blood is impelled by the systole of the ventricles and the elasticity of the arteries stores up some of this expulsive force of the heart and restores it. The muscular fibers are not supposed to do much more than to maintain the regular lumen of the vessel His experience at Spa noting the effects of carbonated baths on hundreds of patients soon convinced him that these prevailing views do not harmonize with the phenomena he was constantly encountering We know that circulation occurs in some living beings without a differentiated heart, and in the embryo before the heart has been formed Certain research workers have reported that the blood pressure may be higher in the rear than in the front legs or carotid of animals especially the differential pressure Another argument in favor of the conception of an active systole of the arteries is that the blood pressure in the portal vein may be higher than in the vessels that precede it. Wybauw gives an illustrated description of an apparatus which reproduces the conditions of the natural circulation, and confirms the necessity for assuming the existence of certain still unsuspected factors in the circulation and the probability of an active systole in the arteries He gives tracings obtained with it and from experimental research, commenting that it is very improbable that a 1 40,000 dose of epinephrin or 1 10,000 of morphin could instantaneously modify the elasticity of the arteries enough to explain the effects observed, while they are easy to comprehend by assuming the existence of a muscular contraction exaggerated or diminished under the influence of substances increasing or reducing the tonus of the vessel wall Everything, he says, seems to sustain the assumption of a reflex arterial systole following immediately on the shock of the pulse beat In this connection he mentions that Richat and Benjamins, in the research laboratory of the University of Utrecht have recently demonstrated the existence of waves of peristalsis in the lacrimal canal

Archives Médicales Belges, Paris

March LXX No 3 pp 193 288

37 *Rarity of Sympathetic Ophthalmia after War Wounds L Weekers —p 193
38 Icterohemorrhagic Spirochetosis Forty Seven Cases L. Wilmaers and E Renaux —p 207 Conclusion
39 Advantages of Wright s Physiologic Method of Treating War Wounds Goormaghtigh —p 225

37 **Sympathetic Ophthalmia in Wounded Soldiers** — Weekers remarks that one of the unexpected happenings in the war is the extreme rarity of sympathetic ophthalmia notwithstanding the great frequency of war wounds of the eyes In his personal experience he has encountered only one instance of it among 800 cases of war injury of one eye He recalls that during the Franco-Prussian war of 1870 fully 55 per cent. of the wounds of one eye were followed by sympathetic ophthalmia, and even during peace times it averages 11 6 per cent according to Hobby s statistics, and 21 per cent. after unsuccessful cataract operations, according to Steffen He has found only a very few cases mentioned in accessible literature during the war while many comment on the rarity of the sympathetic involvement of the other eye These facts justify conservative treatment of the wounded eye unless one's hand is forced by irritation and pain It is much better, he thinks, to retain the eyeball, even with vision entirely lost, than to be forced to depend on a complete prosthesis He is inclined to ascribe the rarity of sympathetic ophthalmia nowadays to the asepsis and antisepsis which are now so generalized, adding that the day when operators will take as many precautions before opening an eye as for a laparotomy, postoperative sympathetic ophthalmia will very nearly disappear completely All the wounded in the war are placed at once in hospitals where the discipline of asepsis reigns, and there is no need to remove a wounded eye for the sole reason of warding off sympathetic ophthalmia. There is no hurry, one can at least wait a few days If the eyeball has to be sacrificed he advises exenteration as giving a better stump while it offers fully as many guarantees against sympathetic ophthalmia as enucleation

Bulletin de l'Académie de Médecine, Paris

March 27 LXXVII No 13 pp 409 423

40 *Radiotherapy for the Sequels of Skull Wounds G Bonnus M Chartier and F Rose —p 418
41 Anomalies in First Ribs A Clerc, R. Didier and J Bobrie.—p 421

April 10 No 15 pp 481 510

42 *Relations between Diabetes and Cancer A Robin —p 481
43 *Pedunculated Grafting Operations from Donor to Recipient Four Siamese Grafts of Femur or Humerus O Laurent —p 488
44 *The Role of the Thyroid and Parathyroids in Uremia A Remond and Minvielle —p 504
45 Necrosis and Gangrene after Subcutaneous Injection of Quinin (L abcès quinique.) Prat Flottes and H Violle —p 507
46 Opaque Drains to Aid in Roentgenoscopy O Pasteau —p 509

40 **Roentgenotherapy of Disturbances Left from Wounds of the Brain and Spinal Cord**—Bonnus and his co-workers report favorable experiences from Roentgen exposures in treatment of localized or reflex phenomena from irritation of the dura sequels of wounds of the skull Also in motor or sensory jacksonian epilepsy, in the phenomena of reflex epilepsy and in certain cases of spastic paralysis from superficial injury of the brain Some months ago they published a favorable report on roentgenotherapy in treatment of trau-

matic affections of the spinal cord and peripheral nerves If adhesions are not too extensive and too stout, the Roentgen exposures facilitate their absorption They also act beneficially on cicatrices left by small hemorrhagic lesions These cicatrices in the meninges or brain are the cause of incessant irritation of cells and motor fibers, and any tendency toward a return to normal conditions is a great gain Of course the exposures are unable to restore destroyed tissues, so the cases must be selected with care

42 **Relations between Diabetes and Cancer**—Robin cites Boas to the effect that in 55 cases of cancer of the digestive tract he found that 12 of the patients were diabetics In Robin's own experience among 144 fatal cases of diabetes, 12 of the patients had cancer, a proportion of 8 3 per cent In his cases the cancer was of rapid development, from fifty days to five months in 5, from six to seven months in 4, and only in 3 instances was the interval before death from thirteen months to two years Some connection between the intensity of the diabetes and the rapidity of the development of the malignant disease seems manifest in both Robin's and Boas' series He does not know of any record of diabetes developing after the onset of cancer, except possibly in the rare cases of cancer of the pancreas Two cases published by Verneuil suggest the possibility that intercurrent diabetes may transform a benign into a malignant tumor Robin noted that obtaining control of the diabetes seemed to check the rapid growth of the cancer In his one case of cancer of the rectum the subsidence of the glycosuria under proper treatment was followed by an increase in weight and the cancer did not prove fatal until the end of the second year The records show further that operations for removal of the cancer are liable to have serious results on account of the tendency to fatal coma thereafter It is better, he declares, to refrain from operating if the urine contains acetone products and the diabetic patient is much debilitated On the other hand, removal of the cancer is justified with incipient cancer even when the diabetes is severe Especially in cases of cancer of the breast, the removal of the cancer permitted long survival He adds in conclusion that six of the twelve cases in his practice were hospital patients Others have encountered cancerous diabetics only in private practice

43 **Siamese Grafts**—Laurent reports four cases in which he repaired an extensive gap in the femur or humerus by a pedunculated graft from another person, the donor and recipient fastened together for eight or ten days In one case a gap in the femur was thus restored by a stretch of the femur from a man whose leg had been amputated, and it required shortening of the excess of femur left In the second case the gap in the humerus was repaired by the fibula with the periosteum from the tibia In each case the redundant bone after amputation was used for the graft, and the results obtained confirmed in every respect the anticipations derived from his previous experimental research in this line of symbiosis grafts To date the results in his four clinical cases are satisfactory Consolidation is complete in the first case and nearly complete in another One of the recipients is obese and has eczema, which renders the outlook dubious in his case Each case is described in detail, each representing a different type of technic The wounds had been severe and it was a question of amputation otherwise

44 **Influence of Thyroid and Parathyroids on Uremia**—Remond and Minvielle here report further research on the role of the thyroid and parathyroids in uremia They found that the animals survived longer after nephrectomy when the parathyroids had been removed with the thyroid than after thyroidectomy alone Removal of the thyroid and of the kidney did not seem to affect the suprarenals particularly, but when the parathyroids had been removed along with the thyroid, the suprarenals showed evidence of intensely increased functioning In six animals an interval of forty-eight or seventy-two hours was allowed to elapse before the kidney was removed after the thyroid-parathyroidectomy The kidneys were invariably pathologic and the uremia was more intense The data related apparently demonstrate that the endocrine glands have something to do with the development of uremic accidents Their influence may be shown by an improvement (*thyroid*) or by a lowering of the resisting powers (parathyroids)

Journal de Médecine de Bordeaux

April, LXXXVIII, No 5, pp 83 100

47 *Surgical Experiences at the Front with the More Severely Wounded (*Une ambulance de grands blesses à Verdun*) J Lalesque—p 83
48 Paralysis from Pressure on Facial Nerve after Fracture of Petrous Bone Operative Correction and Cure Brindel—p 87
49 An Epidemic of Dysentery P Mauriac—p 89
50 Camp Garbage Incinerators P Lande—p 95
51 Minute Proportions of Copper in Vegetables and Meats (*A propos du cuivre dans les tomates*) P Carles—p 97

47 **Treatment of Wounded Unable to Be Moved**—Lalesque relates that during his seventy days' work in charge of an ambulance at Verdun he made a practice of getting the severely wounded to bed at once, with Menciere's balsam to the wound, giving warm drinks and stimulants keeping the body warm and injecting saline and camphorated oil, resisting the temptation to operate first Then watching over him he was ready to operate at the first feasible moment, five, eight, ten hours after his arrival Men with wounds of the chest were placed seated in bed, with plenty of dressings, and were sent to the base hospital early, no attempt at operation being made in the field station His experience with abdominal wounds was that the men would either recover without intervention or were irremediably doomed, and he never operated in this class of cases during his Verdun days Some of those supposed to be doomed finally recovered or were able to stand an operation later When amputation was necessary, he aimed to do it as rapidly as possible, striving to keep the shock down to the minimum He found metal retractors for the soft parts indispensable in amputating, no other means of guarding and saving the soft parts answered the purpose in these amputations when it was a question of saving life rather than of making an elegant stump The stumps thus obtained were functionally excellent He never cut flaps but saved as much of the skin as possible and the wounds kept a good aspect under compresses wet with Dakin's solution No attempt at suturing was made as there was no assurance of asepsis in those hurried days of carnage, and he did not have the equipment for Carrel treatment

Paris Médical

April 7, VII No 14 pp 261 292

52 Tuberculosis Suspects. E Sergent—p 263
53 Welfare Work for Tuberculous Soldiers during and after the War L Bernard—p 268
54 Pleurisy and Tuberculosis Morichau Beauchant—p 272
55 Early Operative Treatment of Wounds of the Thorax and Lung A Latarjet—p 275
56 Extraction of Foreign Bodies in the Lungs J Guyot—p 280
57 The Working Capacity of the Tuberculous for Outdoor Work A Vigné—p 284

Presse Médicale, Paris

March 29 XXV, No 18, pp 177 184

58 *Is Chronic Renal Tuberculosis Ever Curable? N Halle—p 177
59 *Prophylaxis of Infection in War Wounds by Powdering with Calcium Hypochlorite H Vincent—p 180
60 *The Blood Count After War Wounds (Quelques *enseignements* cliniques fournis par l'examen du sang apres les blessures) P Govaerts.—p 180

April 2 No 19 pp 185 200

61 *Dehydration of Blood and Organs in Diabetic Coma A Chauffard Le Conte and Dorie—p 185
62 Polyvalent Serotherapy in Treatment of *Wounds* E Leclainche and H Vallee—p 187
63 Meningitis in Icterohemorrhagic Spirochetosis S Costa and J Troisier—p 189
64 Present Status of Our Knowledge of Action of Epinephrin on Cardiovascular Apparatus L Binet—p 191

58 **Curability of Renal Tuberculosis**—Halle declares that an anatomic cure of tuberculous processes in the kidneys has been definitely established as a fact only in one *form* of chronic renal tuberculosis, namely, closed parenchymatous tuberculous processes With other forms it may be possible, but it has not been proved to date Tubercles in the kidney may shrivel into hard bunches with loss of substance and

more or less complete fibrous scars This form of healing occurs, he says, in about 33 per cent of the cases The various stages of this shriveling and loss of substance, deforming the kidney, are shown in a number of illustrations Spontaneous, medical healing cannot be counted on with any certainty, however, so that nephrectomy is still as ever the most reliable means of curing renal tuberculosis

59 **First Treatment of War Wounds**—Vincent reiterates here his plea for dusting war wounds thick with a dry powder consisting of calcium hypochlorite and boric acid in the proportions of 1 10 This prophylactic treatment is particularly useful when the wounded are coming in in large numbers The powder can be applied again the next day, if there is delay in getting the wounded to the hospital This powder has a powerful sterilizing action and seems to ward off gas gangrene. It has been called the ideal dressing for the battle field

60 **The Blood Findings in the Wounded**—Govaerts reproduces some charts which show that after a serious wound the red and white counts are both high If in the six hours after the wound the reds have dropped to 4 000,000 or below, while the whites have climbed to 30 000, we can be sure there is a serious hemorrhage and the outlook is grave Saline infusion is not enough in this case, transfusion of blood is called for If internal hemorrhage is suspected high leukocytosis confirms the necessity for operative intervention In one such case the number of reds was normal but the whites numbered 31,600 The laparotomy revealed complete rupture of the spleen In the course of treatment of a wound, if the reds increase suddenly in numbers, a reaction on the part of the peritoneum or effusion in some serous cavity can generally be found to explain it When the number of reds shows a gradual decline through four days, infection is usually installed In a typical case described, the arm had been torn out by a shell. The reds numbered 4 800,000 at once but the third day only 2,780,000 were found The man seemed to be doing well, but the next day the reds had climbed to 4 700 000 and the whites began to show an upward tendency having dropped previously from 31,000 to 11 000 The man died the next day from peritonitis, a scrap of the shell having injured the liver

61 **Dehydration of Blood and Organs in Diabetic Coma**—Le Conte and Dorie comment on the evident signs of dehydration which are common in diabetic coma but they do not regard them as the cause of the coma They appear only after the latter is under way The dehydration shows most in the eyeball In two typical cases related in detail, the necropsy findings corresponded to the degree of dehydration evidenced during life. The specific gravity of the blood was 1 064 and 1 068 while the reds in the woman of 31 numbered 8 340 000 In the other patient, a man of 66, the composition of the blood had been modified by copious drinking of water and the reds dropped nearly to half their original figure The pressure in the arteries may be so low as to amount to actual heart failure with suppression of urine secretion The coefficient of dehydration in the two cases was for the liver 15 and 20 per thousand, for the brain 30 and 5, for the kidneys 60 and 40 and for the pancreas 95 and 45 per thousand The dehydration is evidently most pronounced in the parenchyma of the kidneys and pancreas The data presented warn that in treatment of diabetic coma it is wise to avoid hypertonic solutions of sodium bicarbonate on account of the extreme concentration of the blood A hypertonic solution would dehydrate the blood still more, and this might leave a clump of corpuscles to plug the vein.

Beiträge zur klinischen Chirurgie, Tübingen

XCIX No 2 pp 23-474 Last indexed Aug 7 1915 p 565

65 *Grafts of Normal Tissue between Blood Relations G Schöne—p 233
66 Volvulus with Ileus from Strangulation by Persisting Omphalo-Enteric Duct. Meissner—p 265
67 *Fistula of the Anus E Goz.—p 268
68 Morphology of the Stomach after Resection C Gocke.—p 294
69 Disinfection of the Skin with Pure Alcohol J Strauss—p 383
70 Restoration of Larynx and Trachea (Ueber plastischen Ersatz von Kehlkopf Luftrohrendefekten) W Capelle.—p 403
71 Intestinal Polyposis Borelius and Sjövall (Lund)—p 424
72 Tuberculous Stricture of the Small Intestine P Carlsson (Lund)—p 455

65 **Homoplastic Transplantation of Normal Tissues**—Schone's extensive experience with transplants of normal skin between rats, mice and rabbits of the same families showed that occasionally the grafts from blood relations healed in place and grew, although many of the implants were finally cast off The grafts between parents and young were not successful so often as between the young of a litter There was also often a difference in the outcome between grafts on the parents from different ones among the young This suggests that possibly the Mendelian or other laws regulating heredity may influence the outcome of the graft The occasional success of grafts on the young from the male parent or vice versa shows that the suckling of the young is not indispensable to the transplantation Schone knows of only one other worker who has experimented in this line with normal tissues He regards it as a most promising field for further research, and suggests that a tentative preliminary graft of skin might be utilized in the clinic to ascertain the prospects for successful implantation of thyroid, kidney or other important tissues in special cases Four colored plates and a few other illustrations reproduce some of the successful grafts One shows the almost normal growth of the fur on the large patch of grafted skin on the back of a mother mouse nineteen months later The graft had been taken from a 3 months old mouse from her last litter

67 **Fistula of the Anus**—Goz has been able to trace to date 55 of 95 patients with fistula of the anus given operative treatment in Angerer's surgical service in the ten years before 1913 No operation was attempted in 4 cases and the outcome is not known in 40 others The entire 95 cases are reported in detail Of the 55 followed to date, 27 were cured, 13 not cured, and 5 have died from unknown cause and 6 from the progress of their tuberculosis Fully 43 per cent of all those patients seemed to be tuberculous, but the recovery of 8 in this group showed that the anal fistula was a local process Other causes are injury from a foreign body and hemorrhoids Diabetes and typhoid seem to have been a factor in some of the cases, the former indirectly by favoring tuberculosis Severing the sphincter at one point does not entail incontinence, but if it is cut at more than one point incontinence is almost inevitable. Cauterizing the fistula with the actual cautery cured the fistula in 67 per cent. of the cases A supplementary operation was required to accomplish this in 14 per cent. of the others Statistics from other clinics are compared with these, all emphasizing that tuberculosis reduces the chances for recovery and recurrence is not infrequent unless the fistula is merely a local process, in which case a complete cure after excision can be counted on

This copy of the *Beitrage* and another—review to follow—were brought from Germany by one of the physicians of an American unit that has recently returned to this country He presented the copies to the medical reference library (Crerar Library) in Chicago

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 7 XLVII No 14 pp 417 448

73 *Sudden Death from Insufficiency of the Epinephrin Producing System (Sogen Minutenherztod) O Steiger—p 418
74 Anicure Prophylaxis and Treatment of Hemorrhoids F Fortmann—p 431
75 *Eclampsia without Convulsions or Loss of Consciousness F Chatillon—p 434
76 Small Epidemic of Infectious Sore Throat with Eruption C Fischer (Montana)—p 437

73 **Sudden Death from Insufficiency of the Epinephrin-Producing System**—Steiger has had a personal experience of four cases of sudden death which he ascribes to this cause There were no symptoms suggesting Addison's disease in the first case, but necropsy revealed cheesy degeneration in both suprarenals as also in the suprarenals of the second and third patients who both presented the typical picture of Addison's disease, one with persisting thymus at the age of 26 The others were men of 70 and 41 The sudden death

followed some special physical exertion The fourth patient was a man of 42 with pigmentation of exposed regions but none elsewhere He came to the hospital under the diagnosis of cardiac insufficiency The blood pressure was 95 mm mercury during systole and 65 during diastole The diagnosis of Addison's disease was made The next day he was up at 10 but became much excited during the visit of some relatives, and was seen to walk up and down, gesticulating At 11 he was put back to bed for a further test of the blood pressure. Suddenly, while preparations for this were being made the patient fell back, as if struck by lightning, absolutely pulseless, but he kept on breathing for seventy or eighty seconds The whole thing was over in from sixty to ninety seconds Cheesy nodules were found in both suprarenals

Steiger explains these cases by assuming that although the suprarenals were much damaged, the chromaffin system was yet able to supply the usual physiologic demand for epinephrin The defective functioning of the suprarenals was manifested in the low blood pressure in all Some special physical exertion or emotional stress, using up large amounts of epinephrin, upset the precarious balance, the insufficient chromaffin was not able to supply enough epinephrin to compensate, and the blood pressure consequently dropped suddenly through the entire cardiovascular apparatus In experiments on animals such a sudden drop in the blood pressure entails instantaneously the collapse of the heart, and usually through fibrillation of the ventricles In the fourth case above described this mechanism seems obvious, the heart action stopped entirely in thirty seconds, respiration keeping up for fifty seconds longer The case is thus a typical instance of Hering's minute-heart-death (*Minutenherztod*)

In these cases of sudden death in the midst of apparent health, the epinephrin-producing system may be diseased alone or in combination with other glands with an internal secretion (status thymicolymphaticus, exophthalmic goiter, or pituitary trouble) The only reliable symptom of epinephrin deficiency is the extremely low blood pressure Persons with this permanently low blood pressure should be given epinephrin systematically It might be possible in this way to ward off sudden death from this cause In any event, absolute physical quiet is imperative for them He discusses the literature on the subject, and calls attention finally to the rare cases of a tumor in the chromaffin system stimulating the suprarenals to exaggerated functioning The mass of epinephrin thus poured into the blood may induce such excessively high pressure in the cardiovascular system that it is unable to bear the strain, and acute heart failure may result. The outcome is the same, but the cause is an excess instead of a deficit of epinephrin The persistence of the respiration after all signs of life from the heart have suddenly stopped is characteristic of these sudden fatalities from a deficit of epinephrin

75 **Eclampsia without Convulsions**—A primipara of 40 had passed through an apparently normal pregnancy and delivery, but five minutes after expulsion of the placenta she grew pale, the pulse rapid and weak, the extremities cold and she died in an hour and a half There had been no convulsions or loss of consciousness, but necropsy revealed extensive hemorrhages in the liver and under the serosa of the gallbladder, with minute hemorrhages numerous elsewhere The uterus had been pressing on the ureters, which had become dilated, the right in particular, with dilatation of the pelvis above The child was in white asphyxia when born and could not be revived, Chatillon says that he knows of only six cases on record in which eclampsia without convulsions occurred after delivery The mortality in the children seems to be 100 per cent Schmid in twenty-four cases was unable to find records of any infants having survived

Gazzetta degli Ospedali e delle Cliniche, Milan

March 11, XXXVIII No 20, pp 305 319

77 *Treatment of Mutism from Shell Shock G Saraceni and S Bonelli —p 308

77 **Traumatic Mutism of Long Standing**—Saraceni and Bonelli report a case of hysteric mutism in a soldier with antecedents showing a tendency to hystero-epilepsy The aphasia had lasted for over six months and treatment of all kinds in various hospitals had failed to break it It resisted a long application of hypnosis, but finally yielded on a second application of hypnosis through an hour and a half

Policlinico, Rome

April 8, XXIV No 15, pp 473 504

78 Turning Over of Bullets (Sul rovesciamento dei proiettili austriaci da fucile) I Scalone —p 475

79 *Inflatable Rubber Tube Tourniquet (Il laccio emostatico Pomponi) V Calo —p 476

80 Present Status of our Knowledge of Dysentery V Forli —p 477

81 Reforms Suggested for the Insane Asylums (La riforma dei Brefotrofi) M Flamini —p 482

82 Decayed Teeth as Affecting Military Service A Chiavaro —p 486

79 **Pneumatic Tire Tourniquet**—The rubber tube in a stout woven cover is inflated, like a bicycle tube, after it is in place Among the various advantages of this form of tourniquet are that more air can be let in or air let out at any moment, without disturbing the patient The pressure is even throughout, and no skill is required to apply this method

Riforma Medica, Naples

March 24, XXXIII No 12 pp 309 336

83 What Is To Be Done for the Tuberculous? A Pirera —p 309

84 *Etiology and Pathogenesis of Acne Rosacea (*Couperose*) P F Arullani —p 314

85 *Factitious Affections of *Arms or Legs Imposing* as Sequels of War Wounds. A. Mori —p 319 Commenced in *No* 11, p 288

84 **Acne Rosacea**—Arullani has investigated with special care seventy-two cases of acne rosacea in order to determine the share of the cardiovascular system in the affection He here gives the details of twenty-four cases all of which sustain his conviction that it belongs in the category of chronic constitutional affections The predisposed are born with a heart that becomes dilated easily, while the blood pressure is low Digestive disturbances, pregnancy, etc, tend to render the circulation still more sluggish, especially in the head The capillaries in the skin become dilated, and as all modifications in the circulation are reflected preeminently in the face, the capillaries here become permanently enlarged and acne rosacea is the result On account of their more sedentary life, it is more common in women, and everything that favors vascular congestions tends to aggravate it Local measures of treatment are futile, except massage The logical treatment is with tonics and other means to raise the hemoglobin percentage and render the circulation more active, with local massage by an expert

85 **Factitious Affections of the Limbs**—Mori describes sixteen cases, with eight illustrations, showing various lesions induced to avoid military service or obtain workmen's compensation Malingering of this kind was described by Hippocrates and all the ages have witnessed it, but it assumed epidemic proportions at the time of the Crusades and Napoleonic wars In workmen it is the hand that is disabled, in soldiers, the leg The workingman has only a mercenary purpose in view and the laws cannot be made too strict to repress and punish this But in soldiers there are many extenuating circumstances The forms he has encountered are edema from a constricting band, traumatic pseudarthritis of the knee, hard edema of the ankle and foot, and twisted foot—all closely resembling disability left by some war wound of the leg In fifteen of his cases a constricting band had been applied to the leg just below the knee or above the ankle In some, constriction was applied both above and below the knee In every case there had been some gunshot or shell wound of the leg which had healed, and the factitious edema had been induced to simulate serious consequences

All were on the left leg, with one exception The man can apply the constricting band easier on the left leg, and can pretend to limp with it more easily No permanent disturbance resulted in any case The edema was always massive and terminated above at a circular line where a groove may show the imprint of the constricting band or, if not, certain changes in the skin suggest that there has been constriction in this region One of the illustrations shows edema of the left hand The hand measured 38 cm around at the base of the fingers, and 30 cm at the wrist and forearm The man had at the same time applied some irritating substance to a small wound on the forearm that kept it from healing He had maintained this factitious lesion for a year until Mori recognized its character and cured the whole in less than two weeks He dressed the arm in a wire netting tube preventing the man s further manipulations, and once a day had a nurse apply a hot mud bath to the arm In a week the hand had returned to normal size This factitious edema once installed can be kept up without further constriction by gravity etc On suspicion of simulation the man should be closely watched and examined at unexpected times, stripping off all the bed and other clothing as constriction may be applied higher up The edema subsides spontaneously when the limb is kept raised and possibly, wound from the end upward

Brazil-Medico, Rio de Janeiro

March 24 XXXI No 12 pp 97 104

86 *The Venomous Fishes of Brazil (Sobre os peixes venenosos) O O R. da Fonseca —p 97 Commenced in No 11 p 90
87 Some Helminths from the Collection in the S Paulo Bacteriologic Institute L. Travassos —p 99

86 **Venomous Fishes**—Fonseca says that the *Lagocephalus laevigatus* is considered by the fishermen as the most poisonous of the fishes of Brazil. It frequents the southwestern Atlantic and has also been found in the Mediterranean, off the coast of Cuba, Florida and the Guianas It has been found at a depth of 200 meters (It is about 3 feet long and is known as the smooth puffer) The poisonous fishes of the spheroides family frequent shallow waters and seem to be restricted to the American Atlantic. Fonseca made 114 tests of the poisonous fishes, the results indicating that the blood spleen and the kidneys of the *Spheroides testudineus* are not toxic while the other organs muscles and skin are highly poisonous 0 05 or 0 1 c c. of an extract, representing 0 01 or 0 02 gm of the fish liver, killed guinea-pigs in a few minutes Young animals injected with extracts of them showed greater resisting power than the older animals The poison has a paralyzing action on the nervous system The poison dialyzes and seems to be thermoresistant.

Prensa Medica Argentina, Buenos Aires

March 10 III No 28 pp 297 304

88 *Treatment of Anthrax in Man with Normal Serum J Penna J B Cuenca and R. Kraus.—p 297 Conclusion
89 Changes in the Vesicular Murmur at the Apices of the Lungs P M Barlaro —p 299

Supplement pp 97 104

90 Influenzal Pneumonia. L Allende.—p 97 Conclusion.
91 Chronic Sigmoiditis M. R. Castex —p 101

88 **Effectual Serotherapy of Anthrax.**—Penna and Kraus here conclude their report of the excellent results obtained in anthrax or malignant pustule by intravenous injection of normal beef serum At first they used prepared immune serum but found to their surprise that normal beef serum was actually fully as effectual All the fifty patients given this treatment promptly recovered These results in the clinic corroborated the assertions of Kraus and Beltrami to the effect that normal beef serum protects rabbits against malignant pustule just as promptly and effectually as the immune serums In the clinical cases the injection was made intramuscularly or subcutaneously in eighteen cases and the curative effect was equally pronounced Among the typical cases described is that a man employed in a slaughterhouse to remove the hides of the cattle A small itching pimple developed on the left wrist which rapidly spread and in five days had become transformed into a malignant pustule, the arm swollen with high fever and pulse of 130 He was given two subcutaneous injections of normal beef serum a total of 60 c.c. the fifth and sixth days and improvement was evident in two days By the thirteenth day he had quite recovered except that the glands in the axilla were still enlarged. The anthrax bacillus was cultivated from the vesicles

Semana Medica, Buenos Aires

XXIV No 5 pp 121 148

92 Pathology of the Placenta (Estudio de los llamados polipos placentarios) E Zarate
93 Progressive Facial Hemiatrophy J M Obarrio —p 125
94 Lymphocytosis in Syphilitics C P Mayer and A. C Gourdy — p 134 Continuation
95 Filling Children s Teeth E Zawels —p 139

No 6 pp 149 190

96 *Extraperitoneal Cesarean Section (Operation de Ritgen Latzko Doderlein) T A Chamorro —p 149

No 7 pp 191 218

97 Gastrulation in Mammals S E. Parodi and V Widakowich —p 191
98 Present Status of Treatment of Puerperal Infection P V Cernadas —p 195
99 History of Public Health and Hospital Service in Argentina E R Coni —p 199

96 **Extraperitoneal Cesarean Section**—Chamorro expatiates on the advantages of a combination of the Latzko and Doderlein technics as providing the ideal method for extraperitoneal cesarean section Infection does not contraindicate it and the cicatrix stands the strain of pregnancies later without harm He gives an illustrated description of five cases in which he extracted the fetus safely by this method with contracted pelvis

Mitteilungen a d med Fakultät der k. Univ , Tokyo

March XVII No 1 pp 1 185 German Edition

100 *Etiology of Tsutsugamushi Disease VIII M Ogata —p 1
101 *Pathogenesis of Epithelioma K Yamagiwa and K. Ichikawa —p 19
102 Behavior of Blood Corpuscles in Experimental Rabies in Rabbits T Koyano —p 69
103 *The Larvae of Filaria Live Longer in Blood Impregnated with Carbon Dioxid M Yamada and T Yamamoto —p 87
104 Behavior of Sugar in the Blood after Ligation of Pancreatic Duct in the Rabbit. (Ueber die Bedeutung der Langerhansschen Inseln fur den Kohlehydratstoffwechsel. I) N Kamimura — p 95
105 The Cytolytic Immune Serum of the Islands in the Pancreas (II) N Kamimura —p 127
106 Epinephrin Scanty in the Blood during Glaucoma K. Kusama —p 137
107 Arcus Corneae Juvenilis Due to Fatty Degeneration of the Cornea K. Kusama —p 159
108 Microchemical Determination of Epinephrin (Ueber die Menlesche Chromreaktion der sogen chromaffinen Zellen und den mikrochemischen Nachweis des Adrenalins) T and A. Ogata —p 173

100 **Tsutsugamushi Disease**—Two colored plates show the biologic details of the fungus which Ogata has cultivated from this disease and with which he has reproduced it in rabbits and guinea-pigs

101 **Experimental Cancer**—Two tables filling four-page inserts and fourteen plates, one colored, show the details of the experiments with which epitheliomas were induced at will by repeatedly painting the inside of the rabbit ear with tar The illustrations show the various steps of this malignant degeneration resulting in the anarchy of the epithelial cell In some of the animals the emancipated epithelial cells proliferated into lymph or blood vessels but no metastasis in internal organs was realized In two cases, however, metastases developed in lymph glands not far away The experiences related confirm the assumption that the mere continuance of the irritation suffices to induce malignant disease on the precancerous modified soil without the intervention of any specific factor

103 **The Filaria Lives Longer in Blood Containing Carbon Dioxid.**—This fact was apparently demonstrated by the research reported and it is suggested as possible that this may be the reason why the filaria larvae are found in the blood at night rather than in the daytime.

Hospitalstidende, Copenhagen

March 28 LX No 13 pp 297 320

109 *Oxyuris Vermicularis in Denmark. S Muller —p 297

109 **Oxyuris Vermicularis in Denmark.**—Müller examined 200 cadavers from the public hospital at Copenhagen and tabulates the findings along with those from another hospital embracing likewise 200 cases Müller's research included the appendix, and he found the oxyuris in 51 per cent of the eighty-two men in 42 8 per cent. of the seventy women, and

in 62 per cent of the forty-eight children (under 15) The trichocephalus was found in 104 of the total 400 cadavers, in over 58 per cent of the children between 5 and 10 The percentage declined with age, but even after 60 they were present in over 15 per cent Muller is convinced that his findings indicate that at least 61 per cent of the inhabitants of Copenhagen harbor the oxyuris, and that the proportion is probably much higher as the illness preceding death had probably reduced the numbers of the oxyuris The trichocephalus was found in 71 4 per cent of the patients from rural districts and only in 36 8 per cent of the town patients

Ugeskrift for Læger, Copenhagen

March 15 LXXIX, No 11, pp 409 438

110 *The Tongue as the Mirror of the Stomach, especially with Achylia and Pernicious Anemia (Tungen som Mavens Spejl) A Faber —p 409

March 22, No 12 pp 439-474

111 *Abdominal Symptoms with Cardiovascular Disease V Scheel —p 439

112 *Mineral Substances in connection with Nutritional Disturbances in Infants C Friderichsen —p 446

110 **The Tongue Mirrors the Stomach Lining**—Faber comments on the revival of interest of late in the pathologic antecedents with stomach trouble, instead of relying too exclusively on the findings with test meals The latter have recently demonstrated anew the influence of nervous factors in both the motor and the secreting functions of the stomach, for example, a patient may present achylia at one test meal and hyperchylia at a later one But among all the numerous articles that have been published on these subjects in the last decade he has sought in vain for any study of the tongue The case records mention merely dry, coated or raspberry tongue Our fathers used to say that the tongue is the mirror of the stomach, but no one seems to heed this now, and Faber declares that by so doing we are closing our eyes to much valuable information The mucosa of the tongue shares in the general gastro-intestinal atrophy with pernicious anemia This atrophy of the tongue mucosa is even an early symptom of the latter and also of cancer, tuberculosis and other pathologic processes which entail atrophy of the stomach lining In short, he affirms, atrophy of the mucosa of the tongue is a sign always of atrophy of the mucosa of the stomach On the other hand, a coated tongue, with normal or large papillae, is a sign that hydrochloric acid is being secreted in normal or excessive amounts

His research has also demonstrated that the saliva generally gives a strongly acid reaction in conditions which are accompanied by atrophy of the stomach He reviews the literature on the tongue findings with various gastro-intestinal disturbances, and remarks that Boas has had little to say on this subject, dismissing the diagnostic significance of the aspect of the tongue as of "extremely subordinate import" Faber tabulates his findings in a total of 106 patients with stomach trouble repeatedly examined with test meals, etc, the saliva reaction tested, and the aspect of the tongue recorded The tongue was found with a thin epithelium layer and few or no papillae, smooth, shiny, and never coated, in all the cases in which atrophy of the stomach mucosa was evident In another group of 130 patients with various internal or constitutional diseases, the tongue showed no signs of atrophy except in five cases of pernicious anemia, one of cancer in the abdomen and one of granulomatosis One patient had gastric achylia or retention, but the tongue was lightly coated and did not seem to be atrophied This points to a nervous element in the achylia in this case rather than to organic atrophy of the stomach lining

Faber cites Hunter's statement in 1913 that in 150 cases of pernicious anemia so many of the patients had a sore tongue that he ascribed diagnostic significance to this He described it as "infective vesicles between the epithelium and the substance of the tongue, with marked neuritic and atrophic changes in the muscle fibers beneath" Faber gives a microscopic section of the mucosa of a normal tongue with its crowd of high projecting papillae, and contrasts with it a section of an atrophic tongue with its smooth level surface The aspect is like that of the gastric mucosa in cases of chronic gastritis, with or without cancer, and in cases of pernicious anemia He cites a few cases to illustrate the diagnostic importance of atrophy of the tongue. In one, for example, a woman of 37 had not much over 3 million reds and 50 per cent. hemoglobin The spleen was enlarged, the saliva acid, the tongue clean and atrophic On the tongue findings, achylia was diagnosed, with pernicious anemia, and the course of the case confirmed the correctness of both assumptions In another case the reds and hemoglobin figures were the same but the saliva was neutral and the tongue coated, with normal papillae The diagnosis here was simple anemia, and the rapid recovery confirmed the diagnosis In all his thirteen cases of pernicious anemia the tongue was invariably smooth, clean and atrophic This finding is not peculiar to pernicious anemia but forms part of the general picture of progressive gastro-intestinal atrophy Only two cases in his total material were encountered which conflicted with this general statement, the two women had chronic dyspepsia or hour-glass stomach It is possible that the tongue findings warn of impending achylia He remarks in conclusion that when we find marked atrophy of the tongue we can dispense with the test meal, unless future research upsets his deductions from his study of the tongue

111 **Abdominal Symptoms with Cardiovascular Disease**—Scheel reports a case of cardiac insufficiency in which repeated vomiting was the most prominent symptom The patient was a woman of 49 and the vomiting had developed about five weeks before There was occasionally some pain in the upper abdomen, possibly traceable to the enlarged liver and spleen The Wassermann test was positive, and there were signs of myocarditis The vomiting kept up to the end, independent of the meals, and necropsy disclosed no abnormal conditions in the stomach The myocarditis was a diffuse sclerosis, of typically syphilitic character In another case a man of 70 had abdominal pains, meteorism and constipation, but the bowels were not obstructed The pains were restricted to the region of the cardia and hypochondrium but there was no dyspnea The pains were so severe that morphin had to be given They spread finally through the abdomen and the pulse grew weak The diagnosis wavered between angina abdominis, arteriosclerosis and myocarditis, but necropsy after death the third week revealed a dissecting aneurysm of the abdominal aorta, without myocarditis In a third case the main symptoms were vomiting, independent of meals, and pain in the left hypochondrium, with hematemesis For some time the man of 66 had had a cough and some shortness of breath The diagnosis wavered between myocarditis and infarction of the lung, but necropsy revealed both these and also coronary sclerosis Death occurred two days after admittance to the hospital The patients with such abdominal symptoms from their cardiovascular disease are liable to get treatment on an erroneous basis The abdominal symptoms may be of the angina abdominis type or merely repeated vomiting The prognosis with angina abdominis is favorable, as a rule The spasm of the vessels causing it generally relaxes in time to ward off hemorrhagic infarction In the young, spasm alone with or without arteriosclerosis, may induce the angina abdominis He advises abstention from tobacco and regulation of the diet to avoid overabundant meals The drugs useful in angina pectoris can be given, including nitrites and iodid

112 **Mineral Metabolism in Sick Infants**—Friderichsen reviews the most important contributions to this subject that have been published in the last few years They have deepened our knowledge of the importance of mineral salts for the infant organism and the dangers when they are being washed out too freely in diarrheic stools Some of the elements of the ash soon predominate over others the output surpassing the intake This shows that the organism is being drained of part of its own mineral content In the mildest form of nutritional disturbances it is the earthy alkalies that suffer, in the next place, alkalies and chlorids and in the severer forms we see calcium and phosphorus predominating over the other mineral elements in the demineralization process This sequence is manifest in all the four forms of the Finkelstein system (acute intoxication, subacute gastro-enteritis, chronic decomposition, and fat dyspepsia)

The Journal of the
American Medical Association

Published Under the Auspices of the Board of Trustees

Vol LXVIII, No 22 CHICAGO, ILLINOIS JUNE 2, 1917

PSYCHANALYSIS AND THE PRACTICE OF MEDICINE

WILLIAM A WHITE, M D

WASHINGTON, D C

The most difficult concept to grasp is that our psyche bears within itself the records of its hundreds of thousands of years of evolution and development just as does our body Just as the body has remnants of a tail and gill slits which bear silent testimony to the path along which it has traveled to reach its present estate, so does the psyche bear similar evidences of its origin, and just as the body in its development has brought into its present structure only these vague reminders of its past, but is what it is today only because of that past, so the psyche, while it, too, contains vague reminders of what has been, is what it is only because of its past, a past on which the present has been constructed This past, the historical past of our psyche, is always growing, for as soon as the material of the present has been used as material in our growth, as soon as it takes its place in the path of our development by being used as a resting place for further superstructures, then it enters into our historical past This is the unconscious

THE UNCONSCIOUS

As man has developed he has had progressively to give up more and more of his primitive, instinctive tendencies as the price for a higher civilization with all of its inestimable benefits As these instinctive tendencies have been overcome, they have been relegated to the unconscious, and out of the successes attained in the overcoming have been forged the weapons with which to win a new victory That these cravings simply have been overcome and buried in the unconscious does not mean they have ceased to exist or that they have ceased to be able to influence the individual Like long forgotten events which a chance association brings flashing into the memory, they may be stirred to activity at any time, or, forgotten and apparently nonexistent, they may nevertheless exercise a continuous but subtle effect on the conscious activities The poet Grillparzer ceased to be able to write poetry at 28 following the suicide of his mother He was in the midst of his composition of the "Golden Fleece" He picked up the thread of his lost art again, however, on the occasion of playing Mozart's Symphony in G minor with a mother substitute, a woman who reawakened his mother associations This was the last piece he had played four-handed with his mother before her death,[1] and so served to give him access again to those sources of energy which had been cut off by her death

In the unconscious, then, we find the instinct motive for conduct, which is the motive of the familiar, the usual reaction (habit), the easiest way, in short, the pleasure motive At the level of clear consciousness, reason and judgment hold sway, here the motive is the reality motive, a clear-cut, conscious, intelligent relating of the individual to the facts of existence, which involves, among other things, impressing of instinct in the service of reality and therefore effort, work Psychanalysis is essentially a study, by a special technic, of the unconscious for the purpose of learning the part the instinctive motives play in the life of the patient In the words of Freud [2]

> Psychoanalysis originated on a medical basis as a method of treatment for certain nervous maladies which are called functional and in which there is recognized with constantly increasing certainty the result of disturbances of the affectivity It attains its object of removing the expressions of such disturbances, the symptoms, by presupposing that *these symptoms may not be the only possible and final outcome of certain mental processes*[3] and with that in view, exposes the history of the development of the symptoms in the memory, reawakens the processes lying underneath these symptoms, and affords them a more favorable outlet under the guidance of the physician For, today, we know that the pathological symptoms are often nothing else than substitute formations for bad, i e., unsuitable, tendencies, and that the conditions of the symptoms are established in the years of childhood and adolescence—at the same time in which the individual is the object of education—whether the maladies actually appear in youth or only in a later period of life
>
> Education and therapy now appear in a reciprocal relation to each other Education will take care that from certain dispositions and tendencies of the child, nothing harmful to the individual or society shall proceed Therapy will come into play if these same dispositions have already caused the unwished-for result of a pathological symptom

Here is the key to the situation An analysis is for the purpose of reconstructing the psychologic history of the patient so far as that history bears on the formation of the symptoms As soon as we do this we invariably find the symptoms represent, symbolize, a form of instinctive activity which belongs to the period of infancy and should have been renounced as the child grew to adulthood, but which, because of some special emphasis it then received, has been retained Common examples are the difficulty with which some children give up the bottle, and adults the habit of nail biting which has been carried over from infancy

In both of these examples it is quite evident that the activities give pleasure and also that they should be renounced In other words, they are infantile They are both interesting, too, as belonging, the first to a real, the second to a symbolic nutritive or self preservative activity, as opposed to a plainly sexual or race preservative form of activity, these being the two forms of expression into which all others are ultimately reduced The implication is that a given individual may retain evidences of his infancy only in certain zones of his conduct, his gastro-intestinal, mouth, ear, eye, skin, genital or other zone These are the so-called partial trends If the tendencies of the individual as a whole, that is, all of his energies, are called by a single name, we may use the term "libido" Then these partial manifestations would be called partial libido trends

---

[1] Pfister Oscar The Psychoanalytic Method translated by C R Payne New York, Moffat Yard & Co 1917 p 120

[2] Pfister The Psychoanalytic Method p v

[3] Italics mine

THE LIBIDO

An analysis of the patient will disclose, then, that one or more of the libido areas has remained at its infantile level of development, has retained its infantile ways of instinctive reaction, of pleasure seeking, has refused to grow up or, to sum it all up, has failed to socialize its libido That is, it has failed to use some of its energies to the larger ends Let me give an example of such infantile and asocial ways of using, let us say, the ear libido From the standpoint of the usual social evaluation, the type of person who is always listening to hear scandal of his associates is despicable He does not listen to hear something good but always to hear something bad, and the worse the better This is a somewhat less obvious pleasure-seeking device than that of the person who is all attention at the telling of every obscene story, but the principle is the same because it is the obscene for which he is really listening Such a person is a pedler of gossip, a besmircher of reputations, and in all sorts of ways, at the level of ear libido (listening) an asocial, destructive member of the community and incidentally a very unhappy and unfulfilled person himself As far as his function of hearing is concerned, he has not grown up He is still using his ear to minister to a low level type of curiosity His ear has not been adequately integrated as a part of a socially useful member of society, and therefore is not used to further socially useful, constructive ends It remains at the instinctive, pleasure seeking level How much better he could use his proclivity to listen by going to lectures, readings or concerts and thus socializing his trend by using it for bringing him into contact with his fellows at socially useful levels

PSYCHOGENIC DISORDERS

Before discussing such character traits as this, though, let me read a list of psychogenic disorders culled from recent writers who were practitioners in various specialties, not psychanalysts, for the purpose of emphasizing the interest in the psychogenesis of apparently physical disorders which has recently arisen, and also because many or most of these ailments would be apt at least to be treated by other than psychologic methods This list includes many forms of asthma, sore throat, difficult nasal breathing, stammering, headache, neurasthenia, backache, tender spine, "weak heart," fainting attacks, exophthalmic goiter, aphonia, spasmodic sneezing, hiccup, rapid respiration, hay-fever, gastro-intestinal disturbance (constipation, diarrhea, indigestion, colitis, gastric ulcer), ptosis of kidney, diabetes, disturbances of urination (polyuria, incontinence, precipitance), menstrual disorders, autointoxication (from long continued digestive disturbances), nutritional disorders of skin, teeth and hair, etc The list might be indefinitely prolonged Let me only briefly add examples of apparently physical disorder for purposes of illustration

Of the vasomotor disorders I cite the case[4] of a girl, aged 15, who, during analysis, exhibited swollen lips This had occurred once five years before when a student had tried to kiss her but she had successfully resisted him A similar attempt had been made before the later recrudescence of the symptom

An example of a skin eruption is the case of a young woman[5] who had areas of erythema on both forearms These areas did not tan on exposure to the sun as did the rest of the skin Analysis showed that the erythematous areas were the places which had been grasped by the mother-in-law in an emotional scene between them The erythema disappeared following the analysis, and the skin in that area then tanned on exposure

Certain cases show well that disturbances of menstruation, dysmenorrhea and suppression may be purely psychogenic, due often to a timid, prudish, neurotic mother who scares her daughter to death over the onset of the new function, or leaves her in ignorance to conjure up her own fears on its appearance Subsequent local treatments, curettage, ventral suspension, etc, not only may not help but may even aggravate the anxiety and make the patient decidedly worse, because, of course, they do not go to the root of the trouble but deal only with results

I have cited these examples for the purpose of showing that psychogenic disorders are by no means confined to such types as the familiar hysterical aphonias and hysterical palsies, with which all are perfectly familiar and which are easy to recognize On the contrary, they frequently produce disorders much more subtle in their manifestations, and, what is more, may involve not only deep seated character defects but also metabolic disturbances in which we are not accustomed to look for signs of psychic causation, for example, visceroptoses caused by psychic disturbances, depressing emotions, acting by way of the vegetative nervous system

Even, however, in instances of such evident hysterical reactions, the mere dealing with the symptom and causing it to disappear is inadequate treatment, for it does not touch the underlying trouble, it leaves the character defect as it was, only, as a rule, to manufacture new symptoms A boy of 17 had for some days a strange feeling in his left arm This feeling was contemporaneous with the desire of his father to take him from his present school and send him to another The boy did not want to go Analysis revealed the fact that when as a child he was about to be vaccinated he struggled so violently that he succeeded in avoiding the disagreeable experience This experience was entirely unknown to the patient until brought out by analysis[6] The interpretation becomes easy if we will use the formula for such cases The symptoms mean a wish that things might be "as they were then" on that other occasion when they tried to vaccinate him That is, he wishes that he may succeed, by his obstinacy, in thwarting the desires of his father as he succeeded before The treatment of such a condition by causing the disagreeable sensation in the arm to disappear by suggestion on the theory that that is the disease can at once be seen to be entirely inadequate to the situation It leaves untouched the character defect, which is to react by obstinacy to disagreeable situations In this respect the boy is retaining an infantile way of dealing with things he does not like, and needs to be helped to grow up, to develop on this side of his character Unless the treatment is directed to such ends, it misses its goal

---

[4] Pfister The Psychoanalytic Method p 32

[5] Personal communication to the author by Dr E J Kempf

[6] Pfister The Psychoanalytic Method, p 44

PRACTICAL PSYCHOLOGY

The difficulty has been, in the past, that psychology has never employed itself with such questions Entrenched in its laboratories it has carried on its work far removed from the every-day life of "the man in the street" But now that is exactly what psychanalysis is demanding of it Why John Smith does not get along with his wife has always been a matter of absorbing interest to the neighborhood, but psychology has never dignified such a problem with its attention It is through just such facts, however, it is because we do not get along with our wives, because we are not interested in our work, because we are not appreciated by our chief, or are imposed on by our associates, because we get too tired, sleep too little or drink too much, because our salary is too small, or we cannot save, or the other fellow who does not do as good work as we do gets more, or a thousand other reasons, none of which for a moment cause the sufferer to seek the advice of a physician, that we are finally coming to see what makes the difference between a happy life, filled with usefulness, and failure Of such problems from the point of view of the educator, Pfister[7] says

> Of the analytic educational work with pupils, who, without being really ill, still because of inner inhibitions make themselves and their families unhappy, there is almost no mention anywhere How the hitherto unobserved impressions of childhood control the whole later development of the normal individual, even to the peculiarity of his style, his choice of a vocation and of a wife, as well as the most insignificant subordinate affairs finds too little discussion The enormous loss of love for fellowmen and of power for work which many individuals suffer, mostly without knowing it, as a result of unfavorable educational influences have not, up to the present time been given their proper weight in the literature Countless numbers of persons who bring heart breaking grief to their parents and other people and cannot help bringing it because they are under neurotic obsessions can by the aid of analysis be changed into agreeable useful individuals

Unless psychology is willing to busy itself with such problems, it may well be called on to justify its existence

Psychanalysis is essentially an educational procedure Its object is to clear away the rubbish which is obstructing the pathway of the patient so that he may have a chance to go forward This is precisely what education tries to do Most emphatically neither should try to impose ideas on others, they should simply make the way free to permit the fullest development of the personality

HEREDITY

It is of course, the fashion in some quarters to emphasize heredity as the responsible agent for all childhood anomalies and deviations from later normal development This is surely the easier way The cry of the eugenists for sterilization laws reminds me of the Queen of Hearts in "Alice's Adventures in Wonderland" with her "Off with their heads"—a simple solution and seductive, but like all such things, too easy We find that we must really come back to a constructive program that involves work, the expenditure of effort, if anything of value is to be accomplished

The psychanalysts believe there are shorter cuts to the neuroses than by way of heredity Here are a couple of remarks by parents which recently came to my attention One mother says that a child has no morals until after 9 years of age Before that they are just little animals and so of course there is nothing to do about it—a fine formula to relieve the parent from all responsibility and sanction a program of do-nothingness Another parent believes in teaching children absolute obedience—a fine thing for the parent surely, but what of the child? How can one expect a child in either one of these households to develop? How is it going to be possible to get any chance at all? As a result must it not almost surely happen that, thwarted in its natural avenues of expression it will seek the by-ways? That is the stuff out of which the neuroses and future inefficiency and unhappiness are built

I cannot refrain from mentioning a recent experience A woman of splendid qualities but with certain childish reactions of a difficult, surly, inaccessible type, which were wrecking her happiness, had all sorts of difficulties with her little boy She and he were in constant conflict One day, toward the end of the analysis, she came to me with this incident She was busy with some photographs when the little boy came in the room He at once started to make things rather lively, whereupon she said, "Now my dear, if you will be quiet you may stay with mother" This was an altogether new reaction on the part of his mother, and so he responded by saying, "Really, mother, may I stay?" She answered in the affirmative, and he proceeded to compose himself and became interested in the pictures, but before finally sitting down, by way of reassurance, looked up and said, "Really, mother, do you mean it, may I stay?" A response of love had been met in kind, and when the analysis was completed, she and her little boy were rapidly getting on a basis of real friendship and comradeship

These illustrations show clearly that it is often not the apparently sick person who needs the attention As in the case of these children, for example, it is often of much more importance to straighten out the mother, without that it might well be impossible to help the child materially The lesson from such cases is that the field of medicine is broadening tremendously We are on the verge of admitting all sorts of problems which a generation ago we did not even know existed The problem of psychanalysis in such instances as these has to do not only with the individual who may come or be brought to the consultation room, but also with the whole family and their social setting Its breadth of application is sufficiently evident without further elaboration

From the cases thus far adduced it will be evident that the theory which accounts for the later neurosis assumes that the trouble began in the early years of childhood, not as the result of some concrete sexual trauma, as many people still think, but as the natural consequence of a fixation of certain areas of the child's interest, so that in this particular respect he does not grow up The cause of this fixation, which, for our present purposes, we may call detention of the libido or interest on the road of development, is that the child's interest is too strongly attracted because of the undue pleasure premium which this particular of interest offers. In the case of the asocial ways of using the ear libido already mentioned, for instance, it would probably be found that the child was early attracted to listening ways of pleasure seeking because of having heard or been told about forbidden sexual matters which he found absorbingly interesting Only by finding such things in the history can the later development be understood That the matter was sexual is ventured only because that is what would be expected from experience That all pleasure founds in the last analysis in sex pleasure is a hypothesis forced on the analyst by his daily experience, it is not an arbitrary hypothesis into which he tries to make every fact fit The hypothesis that all pleasure, in its ultimate analysis, is reducible to that quality of emotion which is associated with the most important act in the life of the individual, from the point of view of the welfare of the race, is not a whit more surprising or more radical than the generalization that all of the attributes of life are traceable to the single property of protoplasm—irritability After all, it is of less practical importance to answer the question "Whence?" than to answer the question "Whither?" It is only a matter of detail how we reply to the query "Whence?" for in any case we have all traveled the same evolutional pathway To the individual, however, it is ~~of the~~ greatest importance that he should be able to make the best use of his opportunities, that he should be able to answer the question "Whither?" in a satisfactory way But there is another aspect of the matter which I think of especial importance

---

[7] Pfister The Psychoanalytic Method p 14

All along the biologic pathway progress has been possible only because each unit, besides preserving its own integrity, has been willing, so to speak, to give something to the larger unit of which it formed a part Each cell, besides preserving its own life, must give up part of its activities to help in the activities of the organ of which it is a part, the organ must do likewise with respect to the larger unit, the individual, and the individual must repeat the process as a member of society—the herd The liver, for example, besides preserving itself as liver, stores up glycogen to be used by the muscles when the individual is in danger, and gives of this store for the larger whole, the man pays his taxes and similarly helps the problem of society, of which he is an integral part It thus comes about that in the process of the successive integrations to progressively larger ends, what we call personality or character issues as an end-result, depending, however, on all those bodily processes which underly it Therefore, according to Adler, character traits ultimately are reducible to terms of organic structure, and so defects of character depend on organ inferiority

ADLER'S CONCEPTS

The adlerian concept would substitute for the freudian theory of "libido fixation" as an explanation for a given defect of character the theory of an inferior organ He believes that an inferior organ gives a sense of insecurity, inferiority, against which the neurotic tries to protect himself by so ordering his life, so regulating his every act, that he may find that security of which the feeling of inferiority has robbed him This effort to find security is the fictitious goal of the neurotic who fails in attaining the maximation of his ego because his efforts are directed along this false path He is not free to deal with reality at his best, but must always subordinate the demands of reality to the inner need of satisfying his craving for security The neurosis or psychosis is therefore a constructive creation, a compromise, a compensation product, which, however, fails because of its false direction His theory, summed up in a few words, reads The neurotic constitution founds in an inferior organ, the inferior organ produces a feeling of inferiority, the feeling of inferiority creates the fictitious goal of the neurotic, whose symptoms result from an effort to mold reality along the false pathway that leads to safety

From this point of view our asocial listener would receive a somewhat different interpretation than we have thus far given, namely, it would be expected that an examination of his ears would show that they were in some way inferior organs In confirmation of this I may say that in an examination of a number of sense organs in hallucinated patients I never found one that could be considered normal[8] Let me add as serving to bring the adlerian and the freudian theories together that Adler asserts that wherever such organ inferiority can be demonstrated he has never failed to find also an inferiority of the sex organs

To come back to our listener Not only should we expect him to show inferiority of the organ of hearing, but also we should expect him to feel a sense of inferiority which would manifest itself in the zone of ear libido We might expect him to feel frightened, for example, if he was unable to hear what people were saying and consequently to feel that they might have been saying something about him, something not pleasant, of course, hatching up a plot to injure him, or the like The picture is familiar enough, and at the pathologic level gives us at once the suggestion of the paranoiac with his hallucinations of hearing and his delusions of persecution

The inferior organ, in this case the organ of hearing, can therefore be seen *to be asocial* in its tendencies because it hangs on to infantile ways of pleasure-seeking which should be abandoned as the individual grows to adulthood in favor of activities that minister more to the *larger good* The individual, after all, can include only what is under central control, the dynamic or metabolic gradient, Child calls it,[9] speaking of the physiologic individual A group of cells may establish their own independent gradient and so break off from the main body and set up a government for themselves This we recognize as one of the determiners of tumor formation A similar independence at the psychologic level makes the individual, in the particular region involved, asocial Asocial conduct may therefore found in organ inferiority

Adler's theories are helpful in orienting the physician toward the larger problems which the patient presents, whether he approaches it from the point of view of the internist or that of the psychologist His theories are admirably calculated to help the internist to grasp the possibilities of organ inferiority as they may affect the psyche and to help the psychanalyst to grasp the origin and meanings of the neurosis as he sees it at the psychologic level, and perhaps to see more clearly on what his limitations are based In any event the two groups of physicians, heretofore separated all too far, both in theory and practice, may find in Adler's views a common ground on which to meet

---

[8] White, W A Hallucinations, Proc. Am Med Psychol Assn, May, 1904

[9] Child C M The Basis of Physiological Individuality in Organism Science, April 14, 1916

SOME APPLICATIONS

I have used illustrations which I have picked with care because I thought them simple and easily understandable. I might add a great many more of mistaken diagnosis, surgical procedures for mental states, etc. For example, we have a boy in the hospital now on whom a partial thyroidectomy was done for a hysterical globus, and I need only mention the delirium of ovariectomies less than a generation ago, a delirium which bids fair to be replaced today by a delirium of colectomies. All are familiar with such instances. Perhaps it is not appreciated, however, how insistent many patients are for operation, how they will argue most ingeniously for it, and seek surgeon after surgeon until one complies. Such patients are a positive menace, especially to the young surgeon who would like to operate anyway. The desire for operation may probably have many causes. I have in mind the case of a young man with a hysterical paralysis of the left leg.[5] The leg in its paralyzed state was only a nuisance, and he wanted it amputated. Analysis showed the paralyzed leg to be a masturbation symbol. He wished to get rid of his masturbation by a species of sacrifice and penance. The paralysis disappeared as the result of a single psychanalytic talk. I recently saw a woman who had had three laparotomies, all more or less exploratory in character, because of pain, and so far as I could determine none of them showed any condition surgically removable. It was plain from my talk with her that the operations were engineered in order to maintain a childlike relation of dependence on the surgeon, of whom she was very fond.

The practice of medicine can no longer neglect the psyche; it must take into consideration the larger issues. A too refined medical specialism concentrates its attention on the particular organ and so is often blind to the meaning of the symptoms as they refer to the whole individual. The old medical specialism considered the organ out of its setting in the rest of the economy; the new specialism must consider the organ in its setting, and in this new specialism the psyche will have a considerable place.

Every once in a while one sees an ordinary illness, more especially some disease of the respiratory organs, "cold," bronchitis or pneumonia, which investigation will indicate was intentionally acquired. Such illnesses are pretty apt to show on analysis that they are suicidal attempts. Such cases suggest that, when one finds a patient suffering from a disease due to exposure and the history shows a degree of carelessness out of all proportion to the patient's usual habits, it would be worth while to look deeper for motives. I am also reminded that some surgical injuries, such as broken bones from falls and the like, may have a similar origin, either as an attempt at suicide or a form of penance. Time does not permit me to elaborate this motive. I can only say that it is universal. A good illustration of its present day forms is seen in the "conscience fund" of the United States Treasury to which annually thousands of dollars are anonymously contributed. I need not speak of the importance of these facts when taken into consideration in connection with workmen's liability acts, accident insurance, sick benefit claims, health insurance, etc.

TECHNIC OF PSYCHANALYSIS

To acquire even a reasonable degree of proficiency in the technic of psychanalysis, as in any other department of medicine, requires careful study and much thought. There is no royal road. Work is the password. But if I counsel work it is not to avoid the issue and have psychanalysis shrouded in mysticism. The analytic results, often, perhaps usually, seem strange, sometimes grotesque. This is perhaps true of the last instances I cited, especially the young man with the paralyzed leg, and the examples of intentional surgical injuries. This is only because they are not formulated in familiar symbols. I have no doubt that many a medical student at his first clinic has looked on the lecturer, who could put his ear to the patient's chest for a minute and then talk for an hour on what he heard, as little else than a wizard, and has felt himself so incapable of ever being able to do likewise that he then and there has felt that after all he was afraid he could never be a doctor. Devote as much time and attention to psychanalysis as this medical student had to devote to the study of percussion and auscultation and pathology and one will find oneself on quite as familiar ground.

If one wishes to enter the field of analysis, the first requisite is to be able to listen to what the patient says. It requires infinite patience and must be fortified by the conviction that everything psychic has a meaning just as truly as does everything physical. A physician would not let a patient sidetrack him from a physical symptom or explain it away. Similarly on the mental side. There must be a reason for everything, although the patient, often with great ingenuity, will slight over the important, emphasize the unimportant, and in every way unconsciously try to mislead. Naturally it requires some experience to deal with such behavior. The way to get the experience is to try it. No adequate attitude toward psychanalysis can be reached by reading alone; it is absolutely necessary to come into intimate personal contact with the problems in an actual, living patient. Before trying it, however, one should take a sufficient course of reading so as to have some idea of what one is trying to do. One will not have to try long before beginning to get a glimpse of what is going on behind the scenes, but it will be some time before one can cope with any real difficulties. As soon as one begins consciously to try to learn something of a patient's psyche, it is surprising how much information can be obtained which will be of value.

Even if one is not disposed to do analytic work, let me suggest that, as psychanalysis is met in the literature from time to time, one's attitude toward it should be that of Leibnitz toward a new book. He said:

> It is characteristic of me to hold opposition as of little account, exposition as of much account, and when a new book comes into my hands I look for what I can learn from it, not for what I can criticize in it.

SEXUALITY IN PSYCHANALYSIS

The reader may be wondering by this time why I have said almost nothing about sexuality. It is because I have not wanted to overemphasize it in presenting what I believed to be large, fundamental considerations. It certainly is not because I in any way minimize its importance, for I do not. Whether or not all pleasure founds in sex, as I have suggested, is a matter of hypothesis. At any rate the problem will be encountered among patients, and must be dealt with and not run away from. With regard to this matter I can do no better than quote Pastor Pfister of Zurich, who says:

Psychoanalysis is not only compatible with the highest ethical and religious demands but absolutely presupposes them The analysis has strengthened me in the conviction that the human being is in no way merely a sexual being of the highest order (which no psychoanalyst has ever asserted) but that the varied mental wealth and noble characteristics which the idealistic philosophy has found in him really belong to him To be sure, I could not avoid the insight that the sexual life possesses a far higher significance in our mental household than the traditional psychology is willing to admit

It is objected that the psychanalytic procedure takes so much time that it is unpractical This complaint comes from the physicians, not from the patients Perhaps it does take a long time and perhaps some way may be found to shorten it, but in the meantime we must make the best of it, and after all that is no argument against the validity of the positions set forth For my part I doubt very much if the time can be materially shortened, the problem is too difficult, it means overcoming prejudice, instinct To make the patients see themselves with intelligence is of necessity a long and tedious task, but no longer than the task of dealing with tuberculosis, although I grant it does demand more time of the physician But after all, what we are trying to do is to rebuild a personality It is a problem in character reformation, and if we succeed in making a person over from a useless invalid into a useful citizen, who shall say that the time was not well spent? Remember, we must "give to the diamond its ages to grow"

EPIDEMIC ULCEROMEMBRANOUS STOMATITIS (VINCENT'S ANGINA) AFFECTING TROOPS

A R CAMPBELL, M D
AND
A. D DYAS, M D
Captains, Canadian Army Medical Corps, and, Respectively, Pathologist and Eye, Ear, Nose and Throat Specialist, Canadian Military Hospital
BRAMSHOTT, SURREY, ENGLAND

During the four months, October, 1916, to February, 1917, 129 cases of this hitherto rare condition have passed through our hands In this article we endeavor to give the results of our routine, laboratory and ward observations, which though incomplete may be of value in Canada and the United States after the conclusion of the present conflict, whither doubtless the infection will be carried by the returning troops

Until the beginning of the war, it was in Europe one of the rarest diseases, and in America practically unknown, at least so far as medical literature was concerned It seems to have first become prevalent in France, where it was known as trench mouth, and believed to be caused by overindulgence in cigarets, etc Now, however, it is so prevalent that it may be classed as among the commonest of disabilities among the troops As usually seen the condition is not such as to confine the patient to bed, but the accompanying depression and the inability to masticate properly causes a serious lowering in efficiency

Vincent's angina is an infectious disease of the mucous membrane of the mouth, throat, bronchi and prepuce By far the most frequent site of infection is in the mouth and throat Next in frequency are the bronchial cases The preputial cases are rare

VINCENT'S ANGINA OF THE MOUTH AND THROAT

Type 1—The largest percentage of cases are of tonsillar type Here the patient on being admitted usually is found to have a yellowish-gray membrane covering one or both tonsils The breath is extremely fetid, the odor differing markedly from that of diphtheria The patient complains of some difficulty in swallowing and of enlarged and tender cervical lymph glands But absence of headache, myalgia and marked prostration is characteristic of angina as contrasted with diphtheria or acute tonsillitis The temperature is slightly elevated, although in some cases it may be as high as 103 5 F The pulse and respiration are but slightly elevated

In the early cases there are only small whitish patches situated in the crypts If the trouble is not treated these patches may spread until the membrane covers the whole tonsil, they may extend over the soft palate, uvula, and even the posterior wall of the pharynx In a well developed case the membrane is yellowish gray, resembling a diphtheria membrane so closely that a differential diagnosis can be made only by a microscope In the early stages it is the superficial destruction of the epithelium

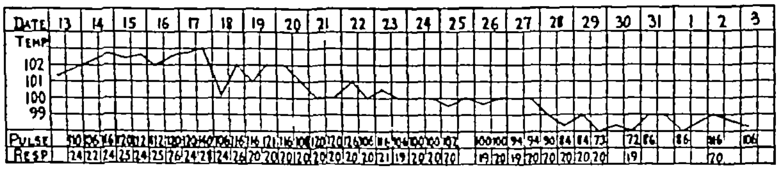
On being removed, it leaves a freely bleeding surface, as in diphtheria In more advanced stages there is an ulceration of the deeper structures so that the tonsil may almost be entirely eaten away In two of our cases the membrane had formed a pocket in the tonsil, eating away the glandular tissues to such an extent that only the supporting tissues and capsule remained

Type 2—The next most frequent type is a deep ulcer on the ramus of the lower jaw, immediately behind the last molar tooth In many cases the posterior edge of the ulcer is swollen so that it projects over the crown of the tooth, making mastication practically impossible In untreated cases, infection spreads along the margin of the gums, causing pyorrhea about the molar teeth

Type 3—Pyorrhea caused by Vincent's organisms is also frequent Usually in an otherwise healthy mouth, it is at first limited to the region of the upper and lower incisors The gums are swollen, spongy and tender, and bleed easily On pressure there is usually a copious flow of pus mixed with blood, the alveolar surface of the gum being eroded and covered with a yellowish membrane In advanced cases the teeth become loose and may even drop out Any condition, as mercurial treatment, tending to lower the vitality of the gums predisposes to a speedy infection with Vincent's organisms A number of our severest cases followed inunction of mercurial ointment for the removal of pediculi A number of advanced cases were found in men who were undergoing antisyphilitic treatment with mercury, the lesions being taken for mercurial gingivitis or syphilitic lesions These cases cleared up quickly under arsenic Decayed teeth or any mechanical injuries to the gums frequently form a nidus for infection The frequency of pyorrhea about the incisors is in our opinion due to injury of the gums in biting

Type 4—General infection of the mouth is the severest type of all, and the patient is acutely ill The membrane extends over the cheeks, tongue, fauces, pharynx and palate, and even to the lips Ulcerations occur on the cheeks where they are in contact with the teeth The tongue is greatly swollen, making speaking and swallowing difficult, and the margin is deeply indented with ulcers corresponding to each tooth. The infection may extend along the ducts into the parotid and submaxillary glands, sometimes causing chronic enlargement of them. A description of a recent case may be of interest.

L, admitted to the hospital, Jan. 13, 1917, with membrane covering both tonsils and extending on the uvula was feeling acutely ill. The temperature was 100.4 F., the pulse 110, and respirations 24. He said his throat got sore two days before. Microscopic examination of a smear from the membrane revealed an almost pure culture of the fusiform bacillus with a few spirochetes and cocci. By the following day the membrane had extended over the entire mouth and tongue and to the lips. January 17 the patient developed a peculiar rash, mostly on the extremities, both the palmar and dorsal surfaces being affected. The spots, about a dozen on each forearm and leg, were about one-quarter inch in diameter, sharply raised, copper colored, and the center of each contained a small oblong vesicle. His temperature went up to 103 F., pulse 140, respiration 28. He was immediately put on intensive arsenical treatment, with salicylates. As the accompanying chart shows, a speedy improvement in his condition followed. A Wassermann test performed at this time was negative. The vesicles dried and the elevations had almost disappeared at the end of a week, leaving copper colored marks in the skin, which are gradually fading. With the fall in temperature the mouth condition began to improve, the swelling decreased, and the ulcers began to heal the membranes becoming as is usual, thin semiopaque and bluish white in appearance almost identical with the mucous patches of syphilis. January 28, swabs taken from these patches failed to show the presence of any Vincent's organisms. This case was quite exceptional in its severity.



Temperature pulse and respiration chart in a case of Vincent's angina in which there was general infection of the mouth.

BRONCHIAL INFECTION

Seven cases have come under our notice in which the clinical picture was a moderately severe bronchitis, with copious expectoration, general depression, and very slight but definite elevation of temperature. These cases ran a course of about three weeks. The sputum in all was loaded with Vincent's organisms, these being the principal organisms present. There were no visible lesions in the mouth or throat. As yet none of these patients have returned to the hospital, and as some of them were treated merely with a simple expectorant mixture, the infection in this situation must be considered to be self limiting with a course of about three weeks. The manner in which the organisms disappeared from the sputum is described further on.

BALANITIS

Four cases were seen in men with long prepuces. There was considerable edema of the foreskin, the inner surface of which was covered with the typical membranous ulcers, some of which had spread to the glans. Infection was due to the lack of cleanliness and to chafing. All cleared up in four or five days under treatment.

BACTERIOLOGY

In about 50 per cent. of all swabs taken from the throats of troops here a few Vincent's organisms are found. The large number of cases of Vincent's angina can be understood when the effect of injury or lowering of vitality of the tissues is taken into account. In lesions the two organisms, namely, the fusiform bacillus and the spirochete, are invariably present at the same time. In early cases the bacilli are practically always much more numerous than the spirochetes, but in more advanced cases the spirochetes are usually the predominant organisms. Various forms of staphylococci and diplococci are always present, and in long standing cases of pyorrhea, the *Bacillus ramosus* and the *Endamoeba buccalis* are frequently found. Carbol-gentian violet is the most satisfactory stain for use in looking for these organisms, the bacilli taking the stain readily and the spirochetes fairly well. Both organisms are usually gram negative.

Various forms of the bacilli are seen: (*a*) large, with from two to four pale bands traversing them; (*b*) smaller, with one pale band in the center, giving the appearance almost of very long diplococci, and (*c*) small, and evenly stained throughout. In old cases spirochetes are frequently seen to contain granules.

In mouth and throat lesions undergoing active treatment, the organisms disappear in a few days. But several of our bronchial cases gave opportunity for more lengthy observation. When first examined the sputum contained about equal numbers of the organisms. After about a week the spirochetes were much more numerous and had become granular, from four to eight darkly stained granules being distributed throughout the length of each. At the end of another week or ten days the organisms were greatly diminished in number, being practically all spirochetes. Many of them were swollen and straightened, looking like a sausage with the tip at one end cut off. Some were empty, others were seen with the granules dropping from the open end. Shortly after this the patients were discharged from the hospital as cured. We have observed the same changes in the organisms when grown anaerobically in ascitic broth containing a piece of tissue. If the cloudy growth be examined after three or four weeks it is found to consist of a few living spirochetes, very numerous granules, and numerous empty shells of spirochetes.

The incubation period of the disease is as yet unknown. We have seen two cases in men who on landing here from Canada, three weeks before, had perfectly healthy mouths.

DIFFERENTIAL DIAGNOSIS

From diphtheria the tonsillar type of Vincent's angina can be distinguished with accuracy only by a microscopic examination of a smear, as the membranes would otherwise be identical in characteristics, namely, location, color, toughness and the fact that when removed they have a freely bleeding surface. However, the patient with Vincent's angina is never so acutely ill as a diphtheritic with the same amount of membrane. He has as a rule no headache, sore back or great depression, his complaints being a sore throat which has come on one or two days previously, difficulty in swallowing, and enlarged and tender cervical glands. In a few of our cases the two infections were found together, these patients on admission being quite ill. This combination is rare. Patients, however, with a Vincent's angina, when in contact with a Klebs-Loeffler bacillus carrier, readily become infected

Microscopic examination is of still greater importance when the patient gives a syphilitic history, especially when he is undergoing mercurial treatment, for this undoubtedly favors the development of Vincent's angina As stated elsewhere, many of our severest cases were found in syphilitics undergoing intensive mercurial treatment, the lesions being completely cured in a few days by the application of an arsenical solution The presence of a positive Wassermann reaction does not exclude Vincent's angina, nor does the fact that a mouth lesion clears up quickly under arsenic exclude syphilis In cases of Vincent's angina with no syphilitic history, however, the Wassermann reaction is always negative A healing ulcer about the mouth or throat will almost invariably be mistaken for a syphilitic mucous patch by any one who is unacquainted with the case

In pyorrhea the onset is often given as from two to three days before admission, and in such cases is usually limited to the upper and lower incisors When the condition is general, the history is usually given of a long standing pyorrhea, and the *Endamoeba buccalis* is frequently found along with Vincent's organisms In bronchitis and balanitis, the diagnosis can be made only by microscopic examination of a smear

TREATMENT

Many forms of treatment have been recommended, including the use of arsenic, iodin, silver nitrate, trichloracetic acid, hydrogen peroxid, tincture of ferric chlorid, and potassium permanganate In slight lesions any of these will bring about a cure Arsenic, however, is undoubtedly the most useful remedy, especially in the form of salvarsan or neosalvarsan As these drugs are expensive and difficult to use, their employment is infrequent For ulcerations about the mouth and tonsils, our routine treatment is liquor arsenicalis (liquor potassii arsenitis) swabbed on three or four times a day Where the ulcer is deep and spreading rapidly it is first well swabbed with 10 per cent silver nitrate solution, and the treatment continued with liquor arsenicalis

In pyorrhea we employ the mixture recommended by Bowman [1] vinum ipecacuanhae, ½ ounce, glycerinum, 1 dram, liquor arsenicalis, sufficient to make 1 ounce A few drops are poured on the patient's toothbrush and the gums are well brushed two or three times a day It is surprising how quickly the lesions will disappear under this treatment, a severe acute pyorrhea being completely cured in five or six days In general stomatitis and gingivitis the patient should be given large doses of liquor arsenicalis internally, sodium cacodylate hypodermically, or salvarsan He also should frequently use a soothing antiseptic mouth wash until the condition is sufficiently under control to permit of local treatment The great majority of cases are cured in from four to seven days We have had few returns of patients discharged as cured

---

[1] Bowman Proc Roy Soc Med, *1915*, **9** For treatment see also *Raimond Progres med*

Medicine Must Be a Progressive Art—The practice of medicine, like the practice of every other profession, must improve in character largely as the result of opposing principles, and our methods of practice, like the methods of any other art, must change to meet the ever-changing conditions of a progressive age.—G Hudson-Makuen, M D

COMPLEMENT FIXATION TESTS IN TUBERCULISIS

A COMPARISON OF THE AUTOLYSATE ANTIGEN AND MILLER'S BACILLARY ANTIGEN *

H J CORPER, M D
AND
H C SWEANY
CHICAGO

In scanning the literature on complement fixation for tuberculosis, one is astonished at the number of substances used as antigen for this test and the great diversity of results obtained, some authors asserting only a 50 per cent efficiency for the test, and others that the test even outclasses the Wassermann reaction, with 95 or more per cent positive reactions in active cases Some are so bold in their contention as to hold a positive complement fixation test as an indication of the presence or absence of tuberculosis which requires treatment against all other findings

There seems to be no uniformity in the findings and contentions of any two observers, owing probably to the facts that each observer is working with his own new antigen, and that only a few go far enough into the work to compare a number of different antigens Elizabeth Fraser[1] stands out preeminently as one of these, her conclusions are conservative, and seem to the trained mind to be well controlled and closely approaching the facts in the case As a result of examinations made with a number of antigens, she concludes that of all those tried by her, the one which gives the clearest cut specific reaction and is most reliable is an emulsion of living virulent tubercle bacilli

It is also noteworthy that *in the methods of preparation of the various antigens described by various authors, these descriptions are often found wanting in details and are frequently impossible of constant preparation* This is especially true of the egg medium antigen of Besredka[2] and the alcoholic antigen of Craig[3] *Even Bronfenbrenner,*[4] *who did a great deal of work with the former, states in one of his papers that he had to rely on Besredka for the preparation of the antigen, and that no two preparations were identical* Alcoholic extracts as used in Craig's work have innumerable times been proved unpractical and worthless, and a recent paper by Lucke[5] corroborates these earlier findings

Recently those of us who have been working on complement fixation were startled by the wonderful results reported by Miller,[6] whose antigen[7] seemed to us to be no more nor less than a bacillary emulsion Wherein lay the discrepancy in these new findings and those of previous experienced investigators? Fortunately the preparation of Miller's antigen was clearly given so that the comparisons were possible by the same observer using other antigens The method of preparation is Twenty milligrams of moist tubercle bacillus mass is weighed out, placed in a conical 15 c c centrifuge tube, and to it are added 90 mg of table salt With a glass rod filed to roughness at the end, this paste is ground by hand for about one hour Distilled water is then added to isotonicity, that is, 10 c.c to the quantities described above This is the antigen Just before it is used it is shaken up, and the heavier particles are allowed to settle in the course of a few minutes Except for the removal of these larger elements, the suspension is used as a whole without centrifugation and without filtration

---

* *From the Laboratory of the City of Chicago Municipal Tuberculosis* Sanitarium

[1] Fraser, Elizabeth Ztschr f Immunitatsforsch 1913 **20**, 291

[2] Besredka, A Compt rend Acad d sc, 1913 **156**, 1613

[3] Craig, C F Am Jour Med Sc *1915*, **150**, *781*

[4] Bronfenbrenner J The Complement Deviation Test with Besredka's Tuberculin, and the Occurrence of Tuberculosis Among Syphilitics as Diagnosed by This Test, Arch Int Med, December, 1914, p *766* *Bronfenbrenner, J*, and Rockman, J Biochem Bull 1914, **3**, *381*

[5] Lucke, Baldwin Jour Immunol *1916, p 457*

[6] Miller, H R The Clinical Value of Complement Fixation in Tuberculosis, The Journal A M A, Nov 18, 1916 p *1519*

[7] *Miller H R, and Zinsser, H Proc Soc. Exper Biol and Med, 1916*, **13**, 134

As the result of his work, Miller concludes that the reaction with his antigen is practically always positive in active tuberculosis Out of 284 pulmonary cases, 275 were positive Nontuberculous and normal patients react negatively, 144 cases were all negative The serums of syphilitics who have no clinically active tuberculosis are negative, the test is, as a rule, negative in arrested cases, out of 113 serums only ten were positive

In previous communications on complement fixation in tuberculosis,[8] an autolysate antigen was described, and the results obtained by means of a monovalent autolysate antigen compared with those obtained with the same monovalent bacillary emulsion The former had a decided advantage over the latter in giving more clear cut reactions, being more stable and more constant of preparation, giving more permanent reactions, and being practically free from anticomplementary influences, the range of antigenic dose being very wide The number of positive reactions did not differ greatly from those obtained with the bacillary emulsion, and in percentage efficiency was corroborative of the findings of Fraser, being positive in about 30 to 40 per cent of all clinically definite cases of tuberculosis, both active and inactive, active cases giving slightly higher percentage results than inactive cases More recent work, to be reported in full later, also indicates that a polyvalent antigen increases this efficiency only slightly, but by no means to 80 or 90 per cent, and that it is always advisable to do a Wassermann reaction on the same serum with a standard antigen (not cholesterinized or reinforced), if this is positive, no conclusions can be drawn as to the value of a positive tuberculosis test On the other hand, a positive tuberculosis test in the absence of a positive Wassermann reaction is significant As far as differentiating activity from inactivity is concerned, this is impossible, even though active cases give slightly higher percentage reactions than inactive cases

With the foregoing disagreements in results obtained by different observers using practically, as far as specificity of the antigen is concerned, the same substances—in one case the bacillary body and in the other the autolysate therefrom—it seemed highly advisable to compare these two, all operations being carried on by the same worker and with all the cases classified in the same way It is easy to appreciate that all the differences in percentage findings may be entirely due either to a difference in classification of cases, to faulty clinical records, or to incorrect classification of such records There is in tuberculosis, when we consider the pathology of the disease, its wide spread, and the inefficiency of present day clinical methods of diagnosis except in advanced cases, a fair chance of making such errors of classification For instance, how many cases of tuberculosis of the tracheobronchial glands are actually found in the course of the ordinary clinical examinations? This is easily appreciated when comparing Roentgen and clinical findings For this reason, conclusions as to the value of a test of this type can be drawn only on the basis of a large number of cases of tuberculosis tested, and only conservatively on the basis of results obtained on supposedly normal persons

Unfortunately, all the patients reported on in this paper were residents in a tuberculosis sanatorium, and therefore the normals may not be so in the strict tuberculosis sense of the word but only so far as clinical findings are concerned For the same reason the number of clear cut clinical cases of syphilis obtained are few, and in the majority of cases can be considered only as Wassermann positive cases, the latter were not included in tabulating the results

An ideal antigen to be of practical value in complement fixation must have a definite even though small range between the anticomplementary and antigenic dose, and the reaction must not be too transient That this is not the case with the Miller bacillary antigen, at least in many instances, is shown in Table 1, in which the antigenic dose and anticomplementary dose of Monovalent Autolysate Antigen 1305, and Miller's antigens 1305, 1563 and 2417 (monovalent), and in Table 2, in which a polyvalent Miller's antigen[9] are titrated In these tables the amount of antigen used in each test is given in cubic centimeters, and the results, hemolysis (—) or absence of hemolysis (+) is given after A, the antigen test, which was done with a strong (+ + + +) tuberculosis serum, and after A C, the anticomplementary test, which was done with the hemolytic system and antigen alone (the absence of hemolysis is here designated by "A" instead of "+," as above) All readings of results in Tables 1 and 2 were made after thirty minutes in a water bath at 37 C To obtain titers of Miller's antigens for use in the subsequent tabulated results it was necessary to use a dose as indicated, which would be serviceable by only a fifteeen minute incubation at 37 C In all the titrations and tests the Noguchi antihuman hemolytic system was used From these titrations it is to be concluded that, when Miller's bacillary antigen is used, the reactions are transient and the results must be read before from twenty to thirty minutes' incubation at 37 C in a water bath, and even then the range of use of the bacillary antigen is only small On the

TABLE 1—TITRATION OF ANTICOMPLEMENTARY AND ANTIGEN STRENGTH (MONOVALENT)*

		Antigen C c								
		0 002	0 003	0 005	0 007	0 01	0 015	0 02	0 03	0 05
1305A	A	—	—	—	±	++	+++	++++	++++	++++
	AC	—	—	—	—	—	—	—	—	—
1305M	A	—	—	±	+	++	++	++	++	++
	AC	—	—	—	—	—	A	AA	AA	AA
1563M	A	—	±	±	+	++	++	+++	+++	+++
	AC	—	—	—	A	AA	AA	AA	AA	AA
2417M	A	—	—	±	±	+	++	++	++	++
	AC	—	—	—	—	—	—	A	AA	AA

* Readings after thirty minutes at 37 C in the water bath

other hand, the range of use of the autolysate is much greater and the reactions are more permanent, comparatively speaking, being readable even after from thirty minutes to one hour at 37 C in the water bath

---

[8] Corper H J Jour Infec Dis 1916 19, 315 Bull Nat Assn for Study and Prevention of Tuberculosis 1916 12, 205

[9] This polyvalent Miller's antigen Parke Davis & Co 0 092090 was prepared from eighteen strains of human tubercle bacilli and was furnished to us by Drs W E King and F W Baeslack to whom we wish to acknowledge our appreciation.

It is also to be noted from these titrations, especially of the antigenic strength, that while in comparison the autolysate antigen gives ++++ reactions, the Miller bacillary antigen gives only a ++ or +++ reaction with a strong tuberculosis serum The complete negative reactions are also not as sharp with a heavy emulsion of Miller's antigen, on account of the turbidity produced by the antigen added

It is difficult to understand how Miller's antigen differs greatly from a simple bacillary emulsion, and in order to satisfy ourselves that the antigenic properties were mainly inherent in the bacilli held in suspension in the salt solution, the filtrate from Miller's Antigen 1305 was tested for antigenic strength and was found to be practically nil This fact was also corroborated by noting that as the Miller antigen was allowed to settle out on standing, its antigenic titer gradually and markedly dropped

With this introduction to the antigens used, and in view of the difficulties encountered in the use of the foregoing antigens, it is now possible to consider the results obtained in examining the serums of 327 patients and presented in Table 3 Of course, as previously stated, the classification and tabulation of tuberculosis cases is difficult on account of the diversity in the manifestations of the disease and its frequent appearance in clinically questionable form It is easy enough to diagnose a case of intrathoracic tuberculosis with tubercle bacilli in the sputum, but glandular cases and those with concealed foci are not so easily diagnosed It is often of great importance then to say whether an individual's symptomatology is due to disease in a focus which has been discovered on physical or Roentgen examination, or due to absorption of toxins from some nontuberculous crypt, such as tonsils, teeth, sinuses, kidney pelves, tubes, gallbladder or appendix It may also be possible that the reactions given by so-called nontuberculous cases can be explained on the ground that these persons had such mild symptomatology from small nonrecognizable foci, which disappeared quickly while the patient was under observation, that there was a question whether active tuberculosis ever existed and the case was classified nontuberculous The term "nontuberculous" is used advisedly with full consciousness of its inaccuracy No attempt is made to differentiate between the infected and noninfected persons, but those who have not and never have had discoverable evidence of active tuberculosis are called nontuberculous In the class of questionably tuberculous are included all cases which give definite signs of clinical tuberculosis either in the glands, the joints, or similar places, but in which there is no pulmonary involvement or in which tubercle bacilli have not been demonstrated The rest of the

TABLE 2—TITRATION OF ANTICOMPLEMENTARY AND ANTIGEN STRENGTH (POLYVALENT)*

		Antigen C c											
		0 01	0 015	0 02	0 03	0 04	0 05	0 06	0 07	0 08	0 10	0 15	0 20
Polyvalent autolysate antigen	A	—	—	—	±	+	+	++	++++	++++	++++	++++	++++
	AC	—	—	—	—	—	—	—	—	—	±	±	A
Polyvalent Miller antigen P D 0 002090	A	—	—	±	±	±	±	+	++	++	+++	+++	+++
	AC	—	—	—	A	A	AA	AA	AA	AAA	AAA	AAA	AAA

* Readings after thirty minutes at 37 C in water bath The small amount of complement in the serum has evidently caused the P D antigen tests to hemolyze more than the A C

TABLE 3—COMPARISON OF RESULTS WITH AUTOLYSATE ANTIGEN AND MILLER'S BACILLARY ANTIGEN

Stage of Disease	Activity	Sputum Negative†				Sputum Positive‡			
		A	M			A	M		
		1305	1305	1563	2417	1305	1305	1563	2417
Nontuberculous		0+ 25—	0+ 31—	5+ 26—	2+ 29—				
Questionable tuberculous		30+ 39—	20+ 49—	26+ 43—	25+ 44—				
Incipient	Inactive	6+ 3—	3+ 6—	3+ 6—	4+ 5—	2+ 0—	1+ 1—	1+ 1—	1+ 1—
	Active	5+ 8—	5+ 8—	4+ 9—	4+ 9—	5+ 10—	6+ 9—	6+ 9—	7+ 8—
M A	Inactive	0+ 1—	0+ 1—	0+ 1—	0+ 1—	1+ 2—	0+ 3—	0+ 3—	0+ 3—
	Active	8+ 2—	5+ 4—	7+ 3—	7+ 3—	35+ 16—	25+ 26—	30+ 21—	32+ 10—
F A	Inactive or chronic fibroids	0+ 3—	1+ 2—	1+ 2—	1+ 2—	8+ 9—	5+ 12—	4+ 13—	0+ 11—
	Active	1+ 0—	0+ 1—	0+ 1—	0+ 1—	62+ 40—	51+ 48—	59+ 43—	60+ 42—
Total cases	Inactive*	42+ 71—	24+ 89—	35+ 78—	32+ 81—	11+ 11—	6+ 16—	5+ 17—	7+ 15—
	Active	14+ 10—	11+ 13—	11+ 13—	11+ 13—	102+ 66—	85+ 83—	95+ 73—	99+ 69—

* This includes nontuberculous and questionably tuberculous
† Either an absence of sputum or a negative sputum
‡ At some time during observation, tubercle bacilli were found in the sputum.

other hand, the range of use of the autolysate is much greater and the reactions are more permanent, comparatively speaking, being readable even after from thirty minutes to one hour at 37 C in the water bath

It is also to be noted from these titrations, especially of the antigenic strength, that while in comparison the autolysate antigen gives ++++ reactions, the Miller bacillary antigen gives only a ++ or +++ reaction with a strong tuberculosis serum The complete negative reactions are also not as sharp with a heavy emulsion of Miller's antigen, on account of the turbidity produced by the antigen added

It is difficult to understand how Miller's antigen differs greatly from a simple bacillary emulsion, and in order to satisfy ourselves that the antigenic properties were mainly inherent in the bacilli held in suspension in the salt solution, the filtrate from Miller's Antigen 1305 was tested for antigenic strength and was found to be practically nil This fact was also corroborated by noting that as the Miller antigen was allowed to settle out on standing, its antigenic titer gradually and markedly dropped

With this introduction to the antigens used, and in view of the difficulties encountered in the use of the foregoing antigens, it is now possible to consider the results obtained in examining the serums of 327 patients and presented in Table 3 Of course, as previously stated, the classification and tabulation of tuberculosis cases is difficult on account of the diversity in the manifestations of the disease and its frequent appearance in clinically questionable form It is easy enough to diagnose a case of intrathoracic tuberculosis with tubercle bacilli in the sputum, but glandular cases and those with concealed foci are not so easily diagnosed It is often of great importance then to say whether an individual's symptomatology is due to disease in a focus which has been discovered on physical or Roentgen examination, or due to absorption of toxins from some nontuberculous crypt, such as tonsils, teeth, sinuses, kidney pelves, tubes, gallbladder or appendix It may also be possible that the reactions given by so-called nontuberculous cases can be explained on the ground that these persons had such mild symptomatology from small nonrecognizable foci, which disappeared quickly while the patient was under observation, that there was a question whether active tuberculosis ever existed and the case was classified nontuberculous The term "nontuberculous" is used advisedly with full consciousness of its inaccuracy No attempt is made to differentiate between the infected and noninfected persons, but those who have not and never have had discoverable evidence of active tuberculosis are called nontuberculous In the class of questionably tuberculous are included all cases which give definite signs of clinical tuberculosis either in the glands, the joints, or similar places, but in which there is no pulmonary involvement or in which tubercle bacilli have not been demonstrated The rest of the

TABLE 2—TITRATION OF ANTICOMPLEMENTARY AND ANTIGEN STRENGTH (POLYVALENT)*

		Antigen C c.											
		0 01	0 015	0 02	0 03	0 04	0 05	0 06	0 07	0 08	0 10	0 15	0 20
Polyvalent autolysate antigen	A	—	—	—	±	+	+	++	++++	++++	++++	++++	++++
	AC	—	—	—	—	—	—	—	—	—	±	±	A
Polyvalent Miller antigen P D 0 092050	A	—	—	±	±	±	±	+	++	++	+++	+++	+++
	AC	—	—	—	A	A	AA	AA	AA	AAA	AAA	AAA	AAA

* Readings after thirty minutes at 37 C in water bath The small amount of complement in the serum has evidently caused the P D antigen tests to hemolyze more than the A C

TABLE 3—COMPARISON OF RESULTS WITH AUTOLYSATE ANTIGEN AND MILLER'S BACILLARY ANTIGEN

Stage of Disease	Activity	Sputum Negative†				Sputum Positive‡			
		A	M			A	M		
		1305	1305	1563	2417	1305	1305	1563	2417
Nontuberculous		6+ 25—	0+ 31—	5+ 26—	2+ 29—				
Questionable tuberculous		30+ 39—	20+ 49—	26+ 43—	25+ 44—				
Incipient	Inactive	6+ 3—	3+ 6—	3+ 6—	4+ 5—	2+ 0—	1+ 1—	1+ 1—	1+ 1—
	Active	5+ 8—	5+ 8—	4+ 9—	4+ 9—	5+ 10—	6+ 9—	6+ 9—	7+ 8—
M A	Inactive	0+ 1—	0+ 1—	0+ 1—	0+ 1—	1+ 2—	0+ 3—	0+ 3—	0+ 3—
	Active	8+ 2—	5+ 4—	7+ 3—	7+ 3—	35+ 16—	25+ 26—	30+ 21—	32+ 19—
F A	Inactive or chronic fibroids	0+ 3—	1+ 2—	1+ 2—	1+ 2—	8+ 9—	5+ 12—	4+ 13—	6+ 11—
	Active	1+ 0—	0+ 1—	0+ 1—	0+ 1—	62+ 40—	54+ 48—	59+ 43—	60+ 42—
Total cases	Inactive*	42+ 71—	24+ 89—	35+ 78—	32+ 81—	11+ 11—	6+ 16—	5+ 17—	7+ 15—
	Active	14+ 10—	11+ 13—	11+ 13—	11+ 13—	102+ 66—	85+ 83—	95+ 73—	99+ 69—

* This includes nontuberculous and questionably tuberculous
† Either an absence of sputum or a negative sputum
‡ At some time during observation, tubercle bacilli were found in the sputum

The placenta, as a rule, is detached more quickly than usual, and not quite so much blood is lost

The administration of an anesthetic when the extract begins to act is a wise measure, and it is well to be always prepared to deliver with forceps Occasionally, even in these well defined cases, delivery may not be immediate, and in such cases the result may be bad for the baby To step beyond these narrow confines of indications is indeed entering on dangerous territory Especially is this true as regards the life of the baby It is recommended in small doses by some good authorities and is frequently used in cases of slight contraction at the brim with sometimes very good results if the birth occurs within a few minutes, but frequently with disastrous results to the baby if delivery is delayed, In such cases, forceps are urgently indicated Its use in such cases is risky beyond question Pituitary extract is recommended in cases of postpartum hemorrhage, but ergot is undoubtedly to be preferred

As to the contraindications, it would seem to be plain that any case which does not come in the category of the indications described above would be an unfit case for pituitary extract It should never be used in normal labor Its use in primiparas, under any circumstance, is not without danger They are more apt to have tetanic contractions, which may become alarming, with their attendant danger to the child The fact that once injected there are no means of controlling its action, violent and tumultuous as it is on occasions, should be a bar against its indiscriminate use

All means should be exhausted to arrive at a definite diagnosis, and the dangers of its use should be fully appreciated and due consideration given before its administration in any case, for such a powerful drug, used indiscriminately, will surely produce sad results to mother or child or both That the use of pituitary extract must always be preceded by the use of the pelvimeter should be an ironclad rule

During the past two years a number of untoward effects and consequences of severe character have arisen As far as the maternal accidents and complications are concerned, I firmly believe that were the slogan of the hour "safety first" borne in mind, a number of them could have been prevented, for beyond question this drug has been greatly abused, as it has been given in too large doses, in cases in which its use was strongly contraindicated, and often, I am sorry to say, for no reason other than the accoucheur's expediency Its use has been reckless and careless The many reports of its rapid and safe action have been one of the greatest dangers DeLee says, "It provides for the physician and his brother gynecologist a lot of chronic sufferers, often incurable, even after mutilating operations"

Lacerations of the perineum of varying degrees are common, and there are a number of reports of severe lacerations of the cervix well up into the body

I have collected the reports of twelve cases of rupture of the uterus out of 1,293 cases given Thus we have a ruptured uterus in about every 106 cases in which pituitary extract is used I admit that this is not accurate, at the same time I doubt whether it is far from wrong and perhaps it occurs oftener than this

RUPTURES

Espent reports one case after two injections

Rowland[2] reports a case of Dr Dobbins of Baltimore

Zullig reports a case in an elderly tredecipara with a narrow pelvis The child was abnormally large Pituitary extract and forceps were used There was a history of premature delivery and perforation

Knoof reports a case in a quintipara after one injection

Stocker[3] reports two cases One patient, a secundipara, had a generally contracted pelvis The other had a normal pelvis, previous labors had been normal, the cervix was patent, there was history of recent abortion and curettage, and general poor health

S J Druskin reports a case in which there was disproportion between the fetal head and the pelvis There were rupture, laparotomy and death

Mosher[4] reports the case of a colored woman, an ambulance case, in which repeated doses had been given The fetus was in transverse presentation The patient died within a few minutes after admission to the hospital Necropsy revealed the fetus in the transverse position, with head and arm protruding through the rent.

R Y Sullivan[5] reports two cases, in each of which there was a contracted pelvis One patient was a primipara and the other a multipara One patient received two doses of 0 5 c c In each case a laparotomy was performed, revealing a large rent in the lower uterine segment Hysterectomy was performed in each case, and both patients recovered, but the fetus in each case was dead Dr Sullivan is convinced that pituitary extract was the factor causing the rupture

R R Huggins of Pittsburgh reports a case in which the measurements were normal, the os was dilated fully, and the head was in the pelvis One c c was given, and within twenty minutes the patient was in state of extreme shock Laparotomy two hours later revealed complete supravaginal amputation of the uterus The child was in the peritoneal cavity

McNeile[6] reports one case, in a quadripara There were indications for use of the drug, the head was well engaged, there was complete dilatation, the membranes were ruptured, and there was decrease in the strength of the uterine contractions A slight oblique contraction was not recognized One c c of pituitary extract resulted in tetanic contraction and rupture in about seven minutes A 7⅓ pound stillborn child was delivered by an easy forceps operation Laparotomy revealed transverse rupture of the lower uterine segment from one broad ligament to the other. Supravaginal hysterectomy was done The patient recovered

An analysis of the detailed reports of all these cases of ruptured uterus with one or two exceptions reveals the fact that pituitary extract was abused, being given to patients who should not have had it To my mind, to give a dose of pituitary extract to a woman who has a contracted pelvis, mild or severe, when the head has not passed through the pelvis, is criminal and, if the obstetrician is not aware of the contraction, he is still little short of being a criminal

Even though the majority of these cases of rupture were due to its misuse, there were one or two cases in which the extract was apparently clearly indicated, Huggins' case, for instance, with normal measurements, fully dilated os and the head in the pelvis, yet rupture followed within twenty minutes after the injection of 1 c c Therefore, it would appear that when used in well indicated cases it is not without danger to the mother However, I feel that when its indications and dangers are more fully recognized by the profession and much smaller doses are given, the dangers to the mother will be reduced to a minimum

The effect on the child, however, presents quite a different phase of the subject Numerous cases of asphyxia and fetal death have been reported when the diagnosis was definite and indications clearly defined

---

[2] Rowland, J M H South Med Jour, 1915, 8, 394 410

[3] Stocker, S Cor Bl f schweiz. Aerzte, 1914 44, 1658-1663

[4] Mosher, G C Surg, Gynec. and Obst, 1916 22, 108

[5] Sullivan, R Y Personal communication to the author

[6] McNeile, L G Am Jour Obst, 1916, 74, 432

The placenta, as a rule, is detached more quickly than usual, and not quite so much blood is lost

The administration of an anesthetic when the extract begins to act is a wise measure, and it is well to be always prepared to deliver with forceps Occasionally, even in these well defined cases, delivery may not be immediate, and in such cases the result may be bad for the baby To step beyond these narrow confines of indications is indeed entering on dangerous territory Especially is this true as regards the life of the baby It is recommended in small doses by some good authorities and is frequently used in cases of slight contraction at the brim with sometimes very good results if the birth occurs within a few minutes, but frequently with disastrous results to the baby if delivery is delayed In such cases, forceps are urgently indicated Its use in such cases is risky beyond question Pituitary extract is recommended in cases of postpartum hemorrhage, but ergot is undoubtedly to be preferred

As to the contraindications, it would seem to be plain that any case which does not come in the category of the indications described above would be an unfit case for pituitary extract It should never be used in normal labor Its use in primiparas, under any *circumstance, is not without danger They are more* apt to have tetanic contractions, which may become alarming, with their attendant danger to the child The fact that once injected there are no means of controlling its action, violent and tumultuous as it is on occasions, should be a bar against its indiscriminate use

All means should be exhausted to arrive at a definite diagnosis, and the dangers of its use should be fully appreciated and due consideration given before its administration in any case, for such a powerful drug, used indiscriminately, will surely produce sad results to mother or child or both That the use of pituitary extract must always be preceded by the use of the pelvimeter should be an ironclad rule

During the past two years a number of untoward effects and consequences of severe character have arisen As far as the maternal accidents and complications are concerned, I firmly believe that were the slogan of the hour "safety first" borne in mind, a number of them could have been prevented, for beyond question this drug has been greatly abused, as it has been given in too large doses, in cases in which its use was strongly contraindicated, and often, I am sorry to say, for no reason other than the accoucheur's expediency Its use has been reckless and careless The many reports of its rapid and safe action have been one of the greatest dangers DeLee says, "It provides for the physician and his brother gynecologist a lot of chronic sufferers, often incurable, even after mutilating operations"

Lacerations of the perineum of varying degrees are common, and there are a number of reports of severe lacerations of the cervix well up into the body

I have collected the reports of twelve cases of rupture of the uterus out of 1,293 cases given Thus we have a ruptured uterus in about every 106 cases in which pituitary extract is used I admit that this is not accurate, at the same time I doubt whether it is far from wrong and perhaps it occurs oftener than this

RUPTURES

Espent reports one case after two injections

Rowland[2] reports a case of Dr Dobbins of Baltimore

Zullig reports a case in an elderly tredecipara with a narrow pelvis The child was abnormally large Pituitary extract and forceps were used There was a history of premature delivery and perforation

Knoof reports a case in a quintipara after one injection

Stocker[3] reports two cases One patient, a secundipara, had a generally contracted pelvis The other had a normal pelvis, previous labors had been normal, the cervix was patent, there was history of recent abortion and curettage, and general poor health

S J Druskin reports a case in which there was disproportion between the fetal head and the pelvis There were rupture, laparotomy and death

Mosher[4] reports the case of a colored woman, an ambulance case, in which repeated doses had been given The fetus was in transverse presentation The patient died within a few minutes after admission to the hospital Necropsy revealed the fetus in the transverse position, with head and arm protruding through the rent

R Y Sullivan[5] reports two cases, in each of which there was a contracted pelvis One patient was a primipara and the other a multipara One patient received two doses of 0 5 c c In each case a laparotomy was performed, revealing a large rent in the lower uterine segment. Hysterectomy was performed in each case, and both patients recovered, but the fetus in each case was dead Dr Sullivan is convinced that pituitary extract was the factor causing the rupture

R. R Huggins of Pittsburgh reports a case in which the measurements were normal, the os was dilated fully, and the head was in the pelvis One c c. was given, and within twenty minutes the patient was in state of extreme shock Laparotomy two hours later revealed complete supravaginal amputation of the uterus The child was in the peritoneal cavity

McNeile[6] reports one case, in a quadripara There were indications for use of the drug, the head was well engaged, there was complete dilatation, the membranes were ruptured, and there was decrease in the strength of the uterine contractions A slight oblique contraction was not recognized One c c. of pituitary extract *resulted in tetanic contraction and rupture in about seven minutes A 7½ pound stillborn child* was delivered by an easy forceps operation Laparotomy revealed transverse rupture of the lower uterine segment from one broad ligament to the other. Supravaginal hysterectomy was done The patient recovered

An analysis of the detailed reports of all these cases of ruptured uterus with one or two exceptions reveals the fact that pituitary extract was abused, being given to patients who should not have had it To my mind, to give a dose of pituitary extract to a woman who has a contracted pelvis, mild or severe, when the head has not passed through the pelvis, is criminal and, if the obstetrician is not aware of the contraction, he is still little short of being a criminal

Even though the majority of these cases of rupture were due to its misuse, there were one or two cases in which the extract was apparently clearly indicated, Huggins' case, for instance, with normal measurements, fully dilated os and the head in the pelvis, yet rupture followed within twenty minutes after the injection of 1 c c Therefore, it would appear that when used in well indicated cases it is not without danger to the mother However, I feel that when its indications and dangers are more fully recognized by the profession and much smaller doses are given, the dangers to the mother will be reduced to a minimum

The effect on the child, however, presents quite a different phase of the subject Numerous cases of asphyxia and fetal death have been reported when the diagnosis was definite and indications clearly defined

---

[2] Rowland, J M H South Med Jour, 1915, **8**, 394 410

[3] Stocker, S Cor Bl f schweiz. Aerzte, 1914 **44**, *1658 1663*

[4] Mosher, G C Surg, Gynec and Obst, *1916* **22** *108*

[5] Sullivan, R Y Personal communication *to* the author

[6] McNeile, L G Am Jour Obst, 1916, **74**, 432

Moran[7] says that the action of the drug is to produce at times strong contraction but not retraction of the uterus, and thus is dangerous and may possibly act as a "medical cranioclast"

I have collected from the literature of the past two years reports of thirty-four cases of fetal deaths and forty-one cases of asphyxia pallida in which resuscitation was effected only after prolonged and vigorous efforts

FETAL DEATHS

Johnson[8] reports four cases The first patient was given three doses, 3 c.c She was in labor fourteen hours A high forceps operation was performed The cord was twice around the neck The child was born in asphyxia livida and revived in the usual way In twelve hours it had a severe convulsion but was revived There was no trace of injury due to forceps. The child died in a convulsion The second patient, a primipara, aged 26, had a slightly contracted pelvis (general) Labor was induced at the end of the twenty-seventh week with bougies and pituitary extract. Two doses, 2 c c, were given The cord was around the neck, it appeared to have a true knot The child was born in asphyxia pallida The third patient, a secundipara, aged 32, with a contracted pelvis, in whom labor was induced at the end of the thirty-sixth week, received 2 c.c., two doses Forceps were applied with great difficulty and the child was born to live only a few minutes The fourth patient, a primipara, aged 20, received 1 c.c. The child was born forty minutes later in asphyxia pallida The cord was around the neck and was not pulsating The scrotum of the child was much cyanosed, and the glans penis protruded through the prepuce. The child was stillborn There were severe after-pains

Bubis[9] reports two cases The first patient, a multipara, received 1 c c A 10 pound baby was born in a few minutes The head was not molded There was a profuse serosanguineous discharge from the nose and the child died six hours later, probably from fracture of the base. The second patient, a multipara, five minutes after receiving 1 c c., gave birth to a 7½ pound baby, cyanosed, which died ten hours later in a convulsion

Ingraham and Chase[10] report one case in a primipara who received 2 ampules following rupture of the membranes six minutes earlier Slight meconium had appeared, though the fetal heart was normal, the cervix fully dilated, and the head just above the perineum Pituitary extract had apparently no effect on contraction but thirty-four minutes later the child was born It was dead One loose coil of cord was around the neck. There possibly may have been an occult prolapse of the cord, or the pituitary extract was at fault.

R Y Sullivan reports two cases of ruptured uterus (mentioned above)

Matheson[11] reports one case, in a primipara, aged 25, proceeding slowly with moderate pains As conditions were not favorable for the application of forceps at the stage of full dilation 1 c c of pituitary extract was given The pains increased in strength and frequency Progress was rapid, and when the head was on the perineum the pains were almost continuous There was a bad tear of the perineum and the child was stillborn both of which Matheson attributes to the pituitary extract

George Mosher Clark reports the death of seven infants in private practice of good men Pituitary extraet was used early in labor, and no other apparent cause for stillbirth existed

J M H Rowland reports two cases The first patient, a primipara aged 38, had a normal pelvis The fetus was in right occipitoposterior presentation The patient received 1 c c. The pains increased in strength becoming quite violent. The head descended rapidly until the perineum was reached when it was delivered slowly, owing to the extreme rigidity of the perineum The child, which had been in good shape half an hour before, was dead All efforts at resuscitation failed The placenta followed immediately, and there was more than the usual amount of bleeding The child was lost in the last few minutes owing to too early separation of the placenta The second patient, a primipara, aged 24, had a slightly contracted pelvis She was in labor twenty-four hours The fetus was in the posterior position The os was two-thirds dilated No fetal heart was heard The head was attempting to engage The patient received 1 c.c. There was advance from partial engagement to the level of the ischial spine In about three quarters of an hour, examination revealed prolapse of the cord beside the head but inside the cervix Craniotomy was followed by delivery

McNeile reported the case cited above

FETAL ASPHYXIA, REVIVED, FORTY-ONE CASES

Ingraham and Chase report six cases of slight asphyxia and five of extreme asphyxia One child, born ten minutes after the administration of pituitary extract when the head was just above the perineum, developed convulsions

Ziegler reports one case of extreme asphyxia

Seeley[12] reports three cases of extreme asphyxia

Brockman[13] reports one case of severe asphyxia

Rowland reports three cases of slight asphyxia and six cases of severe asphyxia

Miller[14] noticed that in nine cases there was more asphyxia than was made necessary by the other conditions present There were six cases of severe asphyxia, with considerable trouble in resuscitation

Reginald Johnson reports eight cases with cyanosis and rigidity The latter condition was marked in some cases for a number of hours In a few cases there were convulsions All the patients had a wide-awake appearance There was one case of severe asphyxia pallida One baby 4 weeks old was very sickly, and hardly capable of sucking the breast.

McFarlane[15] reports two cases There was marked asphyxiation, and there was no other apparent cause than the use of pituitary extract.

In all of the cases the reporters felt that pituitary extract, if not the sole factor, was certainly a very potent factor in the production of the asphyxia The majority of all papers on the subject noted that in the cases in which pituitary extract was used the babies presented more asphyxia than the conditions ordinarily would call for Meconium is frequently seen in liquor amnii after administration of pituitary extract

Of course, there are numerous writers who state that they have seen no deleterious action on the fetus

The explanation of the asphyxia is that in all probability it occurs late, probably in the last several minutes of labor when the placenta is about ready to separate from the uterus The tumultuous and prolonged contraction with the shortened intervals constrict the placental site, limiting the amount of blood going to the placenta The blood, therefore, is not properly oxygenated There is also the possibility of a partial premature separation of the placenta, shown by the fact that in several cases the placenta is expelled immediately after the birth of the baby Another factor which may enter is that during a violent contraction the cord may be constricted between the uterine wall and some hard part of the fetus, for instance, the sacrum, trochanter or shoulder, resulting in asphyxia

Heard reports three cases of diffuse nervous lesions due to cerebral hemorrhage and resulting in terrible afflictions, one at 9 months, one at 13 months and one at 19 months of age In each case the parents were healthy, and the mother was a multipara with the history of previous normal births There was no history of prolonged or difficult labor, but in each case pituitary extract was administered early in labor, and birth was precipitate very shortly after In each case, efforts at resuscitation were required and convulsions followed later, in two they continue to recur Heard[16] is convinced that these were cases of cerebral or meningeal hemorrhage and that pituitary extract was the etiologic factor in their production

---

[7] Moran J F Personal communication to the author

[8] Johnson Reginald Dublin Jour Med Sc. 1915 **140** 241 260

[9] Bubis J L Surg Gynec. and Obst. 1915 **21**, 659-662 Am Jour Obst., 1916, **73** 673-675

[10] Ingraham C. B and Chase P M Colorado Med 1915 **12** 190 194

[11] Matheson Farquhar New Zealand Med Jour 1915 **14** 294

[12] Seeley W F Tr Clin. Soc. Univ Mich 1914 **5**, 128 132

[13] Brockman R St. L. St. Barth Hosp Jour 1915 1916 **23** 8

[14] Miller J L. West Virginia Med Jour 1914 1915 **9** 411-413

[15] McFarlane W D Glasgow Med Jour 1915 **84**, 194 196

Obstetricians generally are coming to a realization that the child has a right to be born alive, and that the license to practice medicine does not also carry with it a license of executioner of the unborn child any more so than of the mother

A COMPARISON OF STATISTICS OF 1914 AND 1916

1914	1916
Cases, 3 952	Cases, 1,293
Ruptured uterus, 8 cases, or 1 rupture in every 494 cases	Ruptured uterus, 12 cases, or 1 rupture in every 106 cases
Fetal deaths, 27, or 1 fetal death in every 146 cases	Fetal deaths, 34, or 1 fetal death in every 38 cases
	Asphyxia pallida, 1 case in every 32

Pituitary extract probably has a place in the obstetrician's armamentarium, but for its undoubted bad effects on the child primarily, and on the mother in a lesser degree, it would seem that its field of usefulness is indeed a limited one[17]

---

[16] Heard, A G Texas State Jour Med, 1916, **12**, 264

[17] In addition to the references already given, the following will be of interest

Bandler, S W Med Rec, New York, 1915, **87**, 55, 166, Am Jour Obst, 1915, **71**, 674 Arch Diagnosis, 1915, **8**, 232 236, Med Rec, New York, 1915, **88**, 607, New York Med Jour, 1915, **102**, 882, Am Jour Obst, 1916, **73**, 77 92, Med Rec, New York, 1916, **84**, 300
Gall, P Gynäk Rundschau, 1914, **8**, 394
Trinks, O Prag med Wchnschr, 1914, **34**, 347 349
Harrison, V W Virginia Med Semi Month, 1914 1915, **19**, 391
Rawlings, J A Bull El Paso Co Med Soc, 1914, **6**, 9 18
Sachs, E Monatschr f Geburtsh u Gynäk, 1914, **40**, 544 573
Howell, H L Illinois Med Jour 1915 **27**, 48 50
Gardiner, J Surg, Gynec and Obst, 1915, **20**, 84
Ebensen, K A Arch mens d'obst et de gynec, Paris, 1914, **4**, and **5**, 99 124
Vogt, E Ztschr f Geburtsh u Gynak, 1914 1915 **76**, 746-762
Fouche, F P South African Med Rec, 1915, **13**, 20
Kinnear, J A Canad Pract and Rev, 1916, **41**, 141 145
Swezey, A T Jour Iowa State Med Soc, 1916, **6**, 53 56
Quigley, J K Pituitary Extract in Obstetrics, The Journal A M A, April 10, 1915, pp 1222 1224
Bell, J F Internat Jour Surg, 1915, **28**, 122
Norris, R C Am Jour Obst, 1915, **71** 741 747
Eddy, I H Ill Med Jour, 1915, **27** 369 372
Fothergill, W E Jour Obst and Gynec Brit Emp, 1915, **27**, 25
Bell, W B Proc Roy Soc Med, 1915, **8**, Obst and Gyn Sect., pp 71 77
Friedman, L J New York Med Jour, 1915, **102**, 712
O'Connor, B J Lancet Clinic, 1915, **114**, 302 305
McCartney, J H China Med Jour, 1915, **29**, 247
Gallagher and Gallagher Surg, Gynec and Obst, 1916, **22**, 490 493
Telfair, J H Am Jour Obst., 1916, **73**, 655 662
Cogburn, H R New Orleans Med and Surg Jour, 1915 1916, **68**, 738 742
King, R W Northwest Med, 1916, **15**, 125 128
Foulkrad, C Therap Gaz. 1916, **40**, 305 307
Valens, J A West. Med News, 1916, **8**, 128
Bell, W B Liverpool Med Chir Jour, 1915, **35**, 292 298
Sheffield, H B Am Jour Obst, 1915, **69**, 379
Trapy Monatschr f Geburtsh u Gynak, 1915, **4**, No 36

Production of Camphor—As set forth in *Commerce Reports*, April 13, 1917, the estimated production of camphor in Japan for the year ending March 31, 1917, was 2,148,197 pounds, an increase of 35,121 pounds as compared with the actual production of 1915-1916 The estimated production in Formosa during this period amounted to 6,619,461 pounds an increase of 520,821 pounds, as compared with the actual yield of the preceding year During 1916-1917, the estimated production of camphor oil in Japan was 4,237,852 pounds, an increase of 275,976 pounds as compared with the actual yield of 1915-1916 The estimated production of the oil in Formosa during the period named was 10,332,379 pounds, or 1,249,153 pounds in excess of the actual yield of 1915-1916

ONE ROAD TO THE CONTROL OF HEART DISEASE

HENRY SEWALL, M D
DENVER

This note begins with analogy and ends in exhortation The analogy consists in a fundamental likeness between the demographic aspects of what I will venture to call subclinical infections of the heart, and incipient tuberculosis of the lungs

No broad scheme for the prophylaxis of tuberculosis was possible until hygienists grasped the fact that tuberculous infection is wellnigh universal Thereupon the practical procedure became one largely of devising means to prevent a harmless anatomic infection from developing into a dangerous clinical disease Accordingly, whatever the physical condition may be which the clinician is called on to consider, he has in mind tuberculosis Particularly in the case of children does he search out in tuberculosis an explanation of morbid symptoms The result is the control of established tuberculosis

Just as civilized mankind harbors almost constantly a more or less latent tuberculosis, so infective disease of the heart, provoking no classical symptoms, but potential for catastrophe, is wellnigh invariable at some period of life The practical conclusion from such a premise is that, as in the case of tuberculosis, the latent anatomic derangement may break down into functional inefficiency in an unfavorable environment, such as added infection or overuse

The proof of such a proposition can be established only after years of definite research, but sufficient evidence is at hand to justify the clinician in accepting it as a working hypothesis As has been slowly apprehended in the case of tuberculosis, only on the assumption of the universality of cardiac infection will the clinician give adequate consideration to morbid signs which point to cardiac disease

From the point of view of the public health officer, Darlington[1] has given statistical evidence that the mortality rate from heart disease is positively increasing throughout the United States, while the general death rate is steadily decreasing

The fundamental basis on which must rest a belief in my thesis is the incompleteness of the evidence offered by physical signs of the organic condition of the heart From the point of view of the pathologic anatomist, Warthin[2] has shown how doubtful is the ultimate cure of any infectious disease and, particularly in the case of syphilis of the heart, that profound organic infection may exist without appreciable clinical signs

Necropsy records, including careful histologic and cultural examinations of the cardiac tissues, must furnish the crucial evidence as to the dissemination of heart lesions, and none can dispute the urgent duty of the pathologist to provide appropriate records On the clinician, however, devolves the task of determining the functional capacity of the heart during life, and the practical application of methods to restore power and prevent failure

We are not here concerned with the obvious cardiac lesions which are causing or threatening broken compensation, but only with what may be called "sneaking heart disease" in which the classical signs of insufficiency are absent but in which there is a dangerous narrowing of what James Mackenzie calls the field of physiologic response

---

[1] Darlington, Thomas Tr Am Clin Assn, 1908, **24**, 120

[2] Warthin, A S Tr Assn Am Phys, 1910, **25**, 580 ibid 1914 **29**, 416

It must be granted that the clinical data of physical diagnosis are absurdly insufficient to supply a reliable fund of information While medical students are taught the words which signify that the pathologic importance of a heart lesion depends on involvement of the heart muscle rather than on changes in its lining membrane, the statement may be boldly ventured that the endocardial murmur is still the sole language through which the heart can speak its limitations to the casual examiner

It is doubtful if the student keeps clearly in mind that even valve lesions are probably all due to infections conveyed not by the intracardiac flood which bathes the valves but by the capillary streams which spring from the coronary circuit, and that the slightest attack on a valve presupposes a more or less widespread infection of the myocardium Granting a locus of infection within the heart, the teachings of the new science of immunology must lead us to suspect that at once the vital reactions of cardiac protoplasm become profoundly modified Even the crude knowledge in our possession today points indubitably to the conclusion that heart tissue so attacked becomes, as it is said, "sensitized" to the particular form of poison with which it is inoculated and thereafter abnormally receptive of new accessions of the same poison, and susceptible to them The clinical facts that support this point of view are simply numberless Fortunately for the preservation of the higher forms of life, protoplasm attacked by a foreign poison, after an initial stage of heightened susceptibility, is apt to acquire a specifically strengthened resistance to the noxa But this "immunity" is always merely relative, and it were vain in a given case to estimate in advance the ratio of virulence to resistance

The canny practitioner of medicine wisely takes his generalizations only as inductions from individual experience Nothing, in my opinion, could be more fruitful for good than for the student of disease to estimate "the field of physiologic response" in the hearts of his patients, according to the views set forth

EXAMPLES OF LATENT HEART DISEASE

A few concrete clinical examples of a familiar kind may make clearer the source of the impulse that led to this article

Case 1—A man of fine physique somewhat under 40 years of age developed articular rheumatism Nothing wrong had previously been found with his heart, but now there was detected obscurely at the apex a murmur of that peculiar quality which one learns to associate with fresh endocardial lesions Under some medication and prolonged rest the physical powers seemed to become completely restored and the murmur changed in quality had nearly disappeared

Many months later the patient was accepted for life insurance by a conscientious and competent examiner who though informed of the history could detect no cardiac lesion whatever Since then a number of times in the course of several years the patient has applied for treatment of a sore throat and on each occasion a slight bruit could be detected at the apex the abnormal sound becoming temporarily a distinct murmur during a recent acute rheumatic attack involving throat and muscles

My conclusion has been that this active business man carries a chronic infection of the heart which sensitizes the organ toward rheumatic toxins It is impossible, of course, to pronounce whether the new endocardial murmur accompanying each attack of sore throat was the mechanical result of an altered circulation or a sign of fresh infective turgidity of the mitral valve One who watches the quality changes in such a murmur day by day is apt to incline to the latter explanation

Of the numerous tests to determine the functional efficiency of the heart, nearly all fall within the limbo of "academic" procedure It is usually doubtful whether a functional inefficiency thus determined shows pathologic impairment or only lack of physical training or weakness of other coordinated organs

Case 2—A man, aged about 25, of powerful physique, who had a perfectly compensated mitral lesion for some years and who was apparently in excellent health and strength, entered a military camp and was set to digging a trench

A physical examination disclosed too late his unfitness for the task A prolonged and fatal illness followed, bearing all the features of an infective cardiac disorder

While the following explanation of this casualty cannot be proved it harmonizes many facts and suggests a safe working hypothesis In the foregoing subject, infection and resistance within the heart had been so balanced that functional processes remained normal When excessive physical strain was put on the anatomically defective organ, its mechanical imperfection led to a "break in compensation," that is, the left ventricle ceased to deliver blood as fast as it was received by the right auricle At once disturbance of cardiac nutrition was instituted Immediately the biologic "resistance" of the heart tissues deteriorated, and the infective forces, which had been held in subjection, began to take on strength and to propagate their kind

A tissue which is the seat of a viable infection is like a seesaw, on one end is seated physiologic resistance, on the other infective virulence, the balance represents the ratio of the two forces Precisely in the same way we frequently find that a quiescent pulmonary tuberculosis is lighted up into progressive disease by injudicious habits Indeed, the salutary relation of rest in active tuberculosis is identical, with greatly increased emphasis, in acute heart disease In tuberculosis, Nature is prone to forgive the careless transgressor, in heart disease, perhaps more rarely

Case 3—A strong youth had a slight indisposition which was evidently rheumatic but he was not so ill as to refrain from riding several miles on his bicycle to an entertainment The return journey was made against a strong wind The boy was obliged to seek his bed on reaching home, and soon developed signs of a general cardiac inflammation that carried him off

I insist that these cases do not find their complete explanation in mechanical overstrain of the heart, but indicate an intense intoxication, such as the immunologist is prone to demonstrate in his reactions of anaphylaxis Moderate overstrain of a normal organ is probably an indifferent episode, but the same test applied to an infected organ sets in play chemical reactions which lead to physiologic destruction

An adequate study of heart disease will disclose another line of contact with pulmonary tuberculosis In the latter disorder, accumulating clinical experience points more and more frequently to the period of early youth as the time of primary infection In the same way the student of breaking cardiac compensation can often trace the history through a long period of latent disease to a definite moment in early life when some extraordinary exertion developed symptoms which themselves represented probably antecedent infection

The cardiac tissue must have a great reserve of resistance against infection We are perhaps too apt to consider that an infective agent attacking the heart possesses a virulence comparable to that of a streptococcus originating in a progressive surgical lesion or in a cadaver at necropsy It is probable, however, that the vast majority of cardiac infections are due to germs of low virulence but great staying powers Case 4 represents a typical history of chronic infection of low virulence

Case 4—A professional man of 65 evidently suffered from an advanced stage of myocarditis with mitral insufficiency His field of physiologic response was limited to the exertion of walking about 100 feet on the level He applied to me about four years ago on account of dyspnea and "bronchitis" His trouble was pulmonary edema due to heart failure Since then he has been restored many times from various ailments, mostly respiratory, all originating in overexertion A rise of body temperature has played no part in his attacks, nor has there been, except during a recent desperate illness, any edema of the feet Tracing the personal history of the patient, the first suspicious event was an attack of scarlet fever at the age of 6 or 7 From 12 to 14 he was very nervous, restless and fidgety, though there was no defined chorea Spending his summers on a farm as a boy he remembered that when he was from 14 to 18 years of age, the exertions of field work would utterly prostrate him He passed an examination for life insurance when about 20 He never had tonsillitis, but from about the ages of 21 to 27 he suffered several rather mild attacks of rheumatism At 54 he was for some months the victim of melancholia, during which he made several desperate attempts at suicide A doctor discovered 'leakage of the heart" when he was 59

A critical study of this history can hardly fail to lead to the suspicion that the heart disease began with the attack of scarlet fever in early youth

It must be admitted that a heart which appears to be normal to superficial physical examination may still be confined to a narrowly limited field of physiologic adjustment beyond which health and life are endangered

The practical physician must have a clear cut picture of the signs of latent cardiac debility in order to know when there is need of prophylactic care and how to achieve it

One whose ear is trained to recognize the typical *lub-dup* of the normal organ in youth will miss the quality, quantity or rhythm of health in the heart sounds of most adult patients Returning to our analogy of the lungs, the examiner will fail to find the "breezy" typical respiratory murmur in most chests he is called on to auscultate in patients of middle age In either case it would be a mistake to pronounce the patient on the verge of clinical disease or even liable to it Skill in physical diagnosis consists largely in distinguishing between morbid signs which are adventitious and those which imply specific organic derangement Two obvious methods are open by which the clinician may estimate the physiologic state of the heart One is through tests of functional efficiency, observing how perfectly the organ rises to and recovers from some unusual strain to which it is subjected The other is by an analysis of the classical cardiac signs — volume, sounds, etc

Functional tests often require considerable care to avoid danger to the patient

Case 5—Some time ago a man past middle age was seen who evidently suffered from an advanced degree of cardiac degeneration but whose complaint was limited to intense dyspnea on exertion The effort of lifting one arm above the head, while standing, caused the external jugular veins to bulge in a way to bespeak the inability of the right heart to deal with the slightest excess of inflow

Case 6—Five or more years ago I made many observations on the jugular pulse of an aged man who presented evidence of mild myocardial degeneration At any time on holding the breath the jugulars would swell and the normal auricular venous pulse would change into the ventricular form, indicating a temporary paralysis of the right auricle, overdistention and relative insufficiency of the tricuspid valve The patient now, over 80 years old, is in excellent health

Case 7—A young man of fine physique presented obscure cardiac symptoms, but manifested no distinct abnormality except slight dilatation of the heart It was significant, however, that, following violent stooping exercise, the second sound of the heart disappeared at the apex This, as pointed out by Broadbent,[3] is an indication that the right ventricle is overdistended and by its pressure against the chest wall throws the tip of the left ventricle away from it Nothing more was heard of the patient for about fifteen years, when he was found dead in a cold stream in which he was trout-fishing

A really rational test of cardiac efficiency involves a study of the blood pressures and of the state of vasomotor coordination, as can be done by comparing blood pressures in the recumbent and in the erect postures, as was pointed out by Crampton[4] and later by myself[5] It may be worth while to repeat a former assertion[6] as to the probable relative clinical significance of the maximal or systolic as compared with the minimal or diastolic blood pressure there is reason to assume that the height of the former determines the danger to the artery, while that of the latter measures rather the danger to the heart.

Janeway[7] has pointed out that in most cases the primary cause of syncope and sudden death is not heart failure but vasomotor failure when the subject assumes an erect position, nevertheless, it is doubtful whether a normal heart would ever stop because of postural draining of blood into the abdominal vessels

The average clinical examination, however, is confined to a static study of the circulation, and undoubtedly a shrewd estimate may be made of the organic integrity of the heart irrespective of such gross signs as valvular murmur and without the strain imposed by excessive exercise One of the salient characters to be observed is the quality of the first sound There is a fine crepitant roughness of this sound, requiring the closest attention for its apprehension, sometimes intensified to a grinding character, which possibly is a sign of friction between the roughened muscle fibers, and therefore significant of myocarditis

Often there is an idefinable abnormality in the first tone, such as once appealed to me in a case of a child, aged 5 years, for whom I had advised tonsillectomy Though the danger of anesthesia was recognized, the child was given chloroform and nearly died under the operation

When the suspicious roughness of the first sound is associated with dilatation of the heart, it may be assumed that cardiac overstrain has already occurred, and considerable care is required not to provoke a break in compensation

Relative loudness of the second sound and weakness of the first sound at the apex is suspicious of myocardial degeneration Possibly no better auscultatory test of the muscular power of the ventricles is available, as was demonstrated long ago,[8] than by increasing the pressure with which the bell of the air-conducting stethoscope is applied over the precordium With increase of pressure, the intrinsically weak sound nearly or quite disappears

---

[3] Broadbent, W H Heart Disease, 1897, p 194

[4] Crampton C W New York Med Jour, 1913 **98** *916*

[5] Sewall, Henry Am Jour Med Sc., 1916 **151**, *491*

[6] Sewall, Henry Internat Clin, Series 23 **4**, 12

[7] Janeway T C New York Med Jour, 1907, **85**, 193

There is a very common auscultatory phenomenon which frequently, if not usually, is a sign of cardiac infection This is a vibratory character of the first sound, as from reduplication or triplication of the element It has not the rising accent associated with mitral stenosis, and it persists throughout the respiratory cycle, is heard over the whole heart, and is not confined to the apex at the end of expiration, as is the common form of first-sound reduplication I have seen this rattling character of the first sound develop during acute rheumatism, and persist after it when there seemed surely no valvular lesion One patient developed it, following sore throat, during an attack of typhoid fever He died, and at necropsy the only gross change found in the heart was slight congestion of the larger mitral cusp

Remembering that heart disease in most cases is the result of infection and that the portal of entry is often within the oral cavity, the wise clinician will not underrate the peculiar importance of pharyngeal inflammations in the persons of those who present a suspicious cardiac condition As was pointed out above, a heart sensitized to certain toxins may be expected to respond disastrously to new accessions of the specific poisons

Case 8—A short while ago, a man aged about 50, who harbored a passive pulmonary tuberculosis, developed a slight follicular pharyngitis without elevation of body temperature The pulse rate however was definitely raised, and the first sound of the heart, always under slight suspicion, became more distinctly abnormal in quality

Directed by the line of reasoning just detailed, the patient was sent to bed for two days with the result ot complete return to normal Such an experience alone, of course, proves nothing, but I submit that it is an example of an effective and neglected method for the control of heart disease

RECOGNITION AND TREATMENT OF HEART DISEASE

I am writing with the keen conviction that no systematic effort toward the control of heart disease is possible until the practitioner of medicine assumes the point of view regarding the prevalence of latent cardiac disease that he has slowly been led to take as to tuberculous infection of the lungs, that it is to be distinctly excluded in every case coming to diagnosis, and that in our study of the heart we should cease to await the development of the signs of mechanical imperfection, much as in the diagnosis of cancer of the stomach we no longer wait for a palpable tumor In short, the clinician must learn to recognize heart disease while it is still a chemical disorder and before its morbid anatomy leads to physical signs

A mechanical break in cardiac compensation probably finds its chief danger in degradation of cardiac nutrition and consequent depletion of resistance toward infective agencies

As to treatment, when cardiac infection threatens to develop or when acute inflammation has already supervened, there is one fundamental resource without which nothing is of avail — complete mental and physical rest

In chronic cases, which are apt to be overlooked unless previous infection has caused mechanical derangement of the valves, it would seem that we cannot do better than to act on the hints from our hard won experience with tuberculosis

In an arrested case of tuberculosis, the patient is functionally normal within certain limits, not to overstep these bounds requires a mode of life ordered according to the rules of hygiene which must be carefully adapted to the needs of each person

1360 Vine Street

---

[8] Sewall Henry On the Use of Stethoscopic Pressure in Physical Examination of the Heart New York Med Jour 1897 **66**, 758

HERPES ZOSTER IN TABES DORSALIS AND GENERAL PARALYSIS OF THE INSANE

SAMUEL L. IMMERMAN, M D
Assistant Physician Philadelphia Hospital for the Insane
PHILADELPHIA

Herpes zoster (acute posterior ganglionitis, acute posterior poliomyelitis, radiculoganglionic syndrome) is defined[1] as a "special type of erythematous eruption with formation of vesicles following the radicular distribution of the segment involved,[2] due to disease of the posterior roots and sensory ganglia" It may be put under two heads [3] 1 Symptomatic zoster, due to (*a*) diseases and lesions of the nervous system implicating the posterior roots and ganglions acute and chronic meningitis, myelitis chronica,[4] tabes dorsalis,[4] progressive muscular atrophy,[4] carcinoma of the vertebrae, Pott's disease, injuries, (*b*) acute infectious diseases, the micro-organisms[5] or toxins of which affect the ganglions and roots, (*c*) poisons by which the ganglions seem to be specifically affected (carbon monoxid, arsenic) Acute gastro-intestinal affections, pneumonia and tuberculosis are not infrequently contributing factors 2 Essential or acute specific zoster, studied extensively by Head and Campbell[6] This is a disease *sui generis*, and may be looked on as analogous to one of the acute infectious diseases The eruption is usually preceded by a prodromal period in which there is malaise and fever, the disease may occur in epidemics, it confers immunity, it is unilateral, and there is no other condition, central or peripheral,[7] found to account for it[8]

---

[1] Jelliffe and White Diseases of the Nervous System

[2] In describing the distribution of herpes zoster it is said more or less satisfactorily to follow the course of certain peripheral nerves This is convenient but is incorrect. The distribution corresponds to the skin areas represented by the posterior ganglions and roots—radicular (sensory) segmental distribution as opposed to spinal (sensory) segmental areas of distribution and peripheral nerve distribution The skin areas are different for these three.

[3] Head Herpes Zoster in Allbutt and Rolleston System of Medicine.

[4] Blaschko Beitrage zur Topographie der Ausseren Hautdecke, Arch f Dermat. u. Syph 1898 **43**, 37

[5] Rosenow E. C and Oftedal Sverre The Etiology and Experimental Production of Herpes Zoster The Journal A. M A June 12 1915 p 1968 In this and other articles the authors emphasize the actual presence of the micro-organisms Sunde quoted by them in this article demonstrated gram staining diplococci in the gasserian ganglion in an old man who died of bronchopneumonia three and a half days after the appearance of an ophthalmic herpes

[6] Head Henry and Campbell H W The Pathology of Herpes Zoster and Its Bearing on Sensory Localization Brain 1900 **23**, 353

[7] Rosenow E. C. Elective Localization of Streptococci, The Journal A M A. Nov 13 1915 p 1687 Rosenow and Oftedal (Note 5) consider the infection atriums as the primary focus and have isolated streptococci from the ganglions

[8] Paralysis may occur in specific herpes zoster due to secondary involvement of the cord Hewlett, A W The Motor Complications of Herpes Zoster California State Jour Med 1906 **4**, 119 121 Magnus V Herpes Zoster Norsk Mag f Lægevidensk. 1916 **77**, 1612 abstr The Journal A. M. A. Jan 20 1917 p 234

Herpes zoster may develop in any phase of paresis,[9] often coming at the onset before the appearance of the characteristic symptoms It may develop in the course of the lightning pains of tabes [10] In tabes and paresis, herpes zoster is incidental to an involvement of the ganglions and roots in the pathologic processes of these diseases,[11] although it must not be overlooked that the diseased condition of the nervous system may open the portal for the specific form It is interesting to note, incidentally, that Knowles[12] mentions the occurrence of herpes zoster together with a maculopapular syphiloderm, and also the occurrence of herpes zoster in a patient with gummas

Zoster involving the entire length of the upper extremity alone (as in the first case report) appears to be uncommon Knowles[12] observed four cases of zoster involving the entire length of the upper extremity out of 273 cases of herpes zoster in which the distribution was mentioned [13]

REPORT OF CASES

Case 1—M K., aged 50, laborer, was an advanced paretic admitted to the Philadelphia Hospital for the Insane, Feb 10, 1915 Oct 25, 1915, there was an eruption confined to the right upper extremity as follows Starting above the axilla the eruption ran along the posterior margin of the deltoid muscle, it occupied an area corresponding to the lower half of the body of the deltoid, below this the outer (lateral) portion of the upper arm, including the outer portion of the flexure of the elbow, and the outer aspect of the forearm, both anteriorly and posteriorly There were a few vesicles on the dorsum of the hand, slightly beyond the wrist, in line with the metacarpal bone of the index finger, there were a few vesicles toward the palmar aspect of the hand, and along the metacarpal bone of the thumb, extending to the base of the nail The distribution[14] of the eruption corresponded to the fifth, sixth, seventh and eighth cervical nerve roots (according to the nomenclature of Bärensprung, a cervicobrachial zoster) The vesicles were in groups, on a reddened base, some were filled with hemorrhagic serum In some places they were broken down with ulceration The patient had not received arsenic, iodids or any other medication, he had not been injured There was no evidence of any actual paralysis, or any alteration of the reflexes from the previous condition The patient did not seem to suffer any pain, this may have been due to his advanced dementia The teeth and the tonsils appeared to be normal

A spinal puncture was done, October 28 The fluid was under much increased pressure (spurted) The Wassermann reaction was positive, culture negative The Wassermann reaction in the blood, taken the same day, was positive. The patient's temperature was normal throughout the course of the eruption A white cell count, November 1, revealed leukocytes, 6,900, neutrophils, 64 per cent., lymphocytes, 34 per cent , mononuclears, 1 per cent , eosinophils, 1 per cent. The patient also had psoriasis, which was present on admission

The eruption had healed (with a few scars) at the time of the patient's death, which occurred, Nov 23, 1915

Owing to an oversight, the spinal cord was not removed at necropsy Histologic examination[15] of the brain confirmed the diagnosis of paresis The upper cervical cord showed marked involvement of both the tracts of Goll and Burdach

Case 2—T M, man, aged 49, vagrant, was admitted to the wards of the Philadelphia Hospital for the Insane, Oct 26, 1915 The patient was a paretic with some tabetic symptoms The eye grounds were normal The Wassermann reaction was positive in both blood and spinal fluid Several teeth were represented by old decayed roots

November 5, a redness was noticed on the right side of the forehead The next day vesicles appeared

November 6, the border of the eruption started at the hair line laterally and went across to the root of the nose, including the upper lid, the conjunctiva was reddened There were a few vesicles on the bridge of the nose The border of the rash then extended up the midline, the upper border was slightly beyond the hair line of the forehead.

November 8, the eruption became infected

November 9, the patient's temperature was 100 F It was normal the next day

November 18, the eruption was practically healed, with rather extensive scarring The hair line of the eyebrow was involved in a scar with some loss of hair The patient complained for a time of slight hyperesthesia in the region involved The sense of pain in this area was considerably diminished, the touch and temperature senses were normal

The following report on the spinal fluid was submitted by Dr Kolmer Clear, total cells, 30 per cubic millimeter, all small lymphocytes, protein reaction positive Noguchi, +, Pandy, +, Nonne, +, Kaplan, ++, sugar, normal, colloidal gold, 5555544311 (paretic curve), Wassermann reaction (dose 0 8 c c), strongly positive, cholesterinized antigen, ++++, alcoholic syphilitic liver, ++++, acetone insoluble lipoids, ++++

The patient's teeth subsequently became loose Dementia and physical signs increased He died, July 23, 1916, in a congestive attack, associated with restlessness and stupor, there were no convulsions or paralyses Aside from atheroma of the aorta, and chronic myocardial and renal changes, the general organs showed nothing of note Grossly the brain showed the following lesions of general paralysis (1) chronic hemorrhagic pachymeningitis, (2) chronic leptomeningitis of the superior and anterior portions of the cerebrum, and (3) granular ependymitis of the floor of the fourth ventricle There was no apparent cerebral atrophy Histologic examination confirmed the diagnosis of paresis The perivascular infiltration was unusually severe in the occipital pole. Gliosis was fairly marked in the column of Goll The gasserian ganglion and its roots showed fibrosis and also round cell infiltration The picture was one of chronic and also acute changes, the latter being of a nonseptic type, and probably specific (syphilitic)

Case 3—P H, aged 51, admitted to the wards of the Philadelphia Hospital for the Insane, June 21, 1915 Blindness commenced five years before, and mental symptoms two months before admission The eyes showed nystagmus, the pupils were equal, slightly irregular and inactive. There was complete optic atrophy of the eye grounds, probably primary The knee jerks were absent. Romberg's sign was present when the eyelids were closed, there was ataxia in the lower extremities, there had been slight difficulty in holding the urine during the last six months, the teeth and the tonsils were normal The patient had a psychosis, but was not a paretic. Tabes dorsalis was diagnosed, a positive mental diagnosis was not made.[16] Dr Kolmer submitted the following report on the spinal fluid, June 14 1916 Clear, 90 cells per cubic millimeter, 92 per cent small lymphocytes, protein reactions strongly positive Noguchi, +++, Nonne, Phase I, +++, glucose content, normal Wassermann reaction (dose 0 8 c.c.), ++++, with the three antigens used above, Lange colloidal gold test typical paretic curve[17]

---

[9] Herissey, Paul Études cliniques sur les troubles trophique dans la paralysie generale, Paris thesis, 1903 De Fursac and Rosanoff Manual of Psychiatry

[10] Osler Practice of Medicine

[11] Poincaré and Bonnet (Ann med psych, 1868 and 1876) first described structural and functional alterations of the sympathetic ganglions in paresis, and Klippel (1892) first described the peculiar microscopic visceral lesions which he attributed to ganglionic changes (Martial Vignaud, Historique de la paralysie géneral, Paris thesis, 1902) These chronic degenerative changes in the ganglions, which are distinct from the acute changes in paresis causing herpes zoster, may be secondary to involvement of the nervous system central to the ganglions (retrograde degeneration)

[12] Knowles, F C Herpes Zoster, Report of Two Hundred and Eighty Six Cases with a Review of the Unusual Features of the Disease, Pennsylvania Med Jour, 1911 1912, **15**, 615 622

[13] Other cases, to which I have had access, are Stopin, Le zona du membre superieur, Paris thesis, 1882 1883 The entire length of the upper extremity was involved in six instances out of seventeen cases of herpes zoster of the upper extremity Gordon, Alfred Cervico Brachial Herpes Zoster, Am Med, 1909, N S, **4**, 627 630 Carpenter, G A Case of Herpes Zoster Extending to the Finger Tips, Rep Sc Study of Diseases of Children, London, 1905, **5**, 3 Pfeiffer (quoted by Blaschko) quotes one case (Footnote 4) In larger series of herpes zoster reported (Hoennicke, Cantrell, Greenough) the exact distribution of the eruption is not mentioned

[14] In determining the level involved, one must take into account the following factors 1 A given area, though usually supplied by a given root, may instead be supplied by the root above, with corresponding changes in the other roots, or by the root below, with corresponding changes in the other roots. 2 In a very large proportion of cases the eruption does not occupy the whole area of a single nerve root 3 The shape of the part involved (whether thin, stout, etc) makes a difference in the appearance of the eruption 4 There is a certain amount of overlapping of supply in a given segment by the one above and below In outlining the area of involvement one includes the zone of hyperemia as well as the eruption proper Cases in which only a single segment is involved are of value in determining the area supplied by a given nerve root In any one case one cannot be absolutely certain which root is involved unless confirmed by necropsy

[15] I am indebted to Dr Samuel T Orton for the histologic studies

June 6, there was redness on the right side of the forehead June 8 vesicles were well marked The outer border of the rash extended upward from the outer end of the eyebrow, the inner border was at the midline. The rash included the upper lid, and the nose to the ala, the conjunctiva was reddened, but contained no vesicles The rash extended backward to slightly beyond the parietal eminence The blood count was normal There was a slight rise of temperature a few days later due to secondary infection June 21, the eruption had well disappeared, except for scabs along the eyebrow

At present, on the forehead, upper lid and the bridge of the nose, the areas which were formerly the bases of the vesicles show loss of pigment Neither in these whitish areas nor in the normal appearing skin can any disturbances of sensation be demonstrated

CONCLUSIONS

Of three patients having an attack of herpes zoster, two were paretics and one a tabetic The cases of herpes zoster were of the symptomatic variety, that is, due to involvement of the ganglions in the pathologic processes of the disease from which the patients were suffering The nature of the ganglionic changes is in all probability specific, that is, due to spirochetes or toxins

Thirty-Fourth and Pine Streets

---

[16] The patient s mental condition may have been dependent on syphilitic changes or alcoholism. On admission dementia though present was not very apparent it has since progressed but is not extreme There is nothing however in the clinical symptoms, which suggests paresis

[17] Solomon Koefod and Welles state that a typical paretic curve may occur not only in patients who do not have paresis but also in patients who do not even have syphilis I have seen two nonparetics with typical paretic curves In one of these at least, the question of paresis sine paresi does not enter (Solomon H C Koefod, H. O and Welles E. S Diagnostic Value of Lange s Gold Sol Test Boston Med and Surg Jour 1915 **173**, 956 960 Solomon H C and Welles E S Varieties of the Gold Sol Test (Lange) in Several Loci of the Cerebrospinal Fluid System ibid 1915 **172**, 625-629) A paretic curve is reported in a child suffering from poliomyelitis with a positive Wassermann in the spinal fluid (Felton L. D and Maxcy K. F The Colloidal Gold Reaction of the Cerebrospinal Fluid in Acute Poliomyelitis The Journal A. M A. March 10 1917 p 752) These observations show that the paretic curve occurs occasionally in conditions other than paresis All of our consulting psychiatrists have agreed that the patient described above is not a paretic.

Milk Distribution a Public Utility—A joint commission of Pennsylvania, Maryland and Delaware appointed to study the milk question with reference to price, distribution, etc., headed by Prof Clyde L King of the University of Pennsylvania recommends (*Survey* February 24), that milk distribution shall be recognized as a public utility The recommendations extend to both production and distribution, and include suggestions for increased state and municipal supervision as well as an attempt to harmonize the interests of producers, dealers and consumers Recognition of milk distribution as a public utility implies the keeping of accounts by dairymen and dealers in a form prescribed by the state, the state examination of accounts, the licensing of all dealers, as at present, the licensing of testers in receiving stations, and the standardization of prices Seasonal inequality of production has been an obstacle to the maintenance of uniform price to producers which makes the financial success of the dairy business uncertain This, it is suggested, can be overcome to some extent by the storage of milk in the form of butter cheese and condensed milk, and the stimulation of new uses at times of greatest yield The competition of milk with other food products and the matter of freight rates complicate the milk supply problem

---

A CASE OF BROWN-SÉQUARD PARALYSIS *

LEWIS J POLLOCK, M D

Instructor in Nervous and Mental Disease, Northwestern University Medical School

CHICAGO

Until recently, many workers, following Brown-Sequard, held that impressions of pain and temperature pass upward through the gray matter, while those of touch and sense of position ascend through the dorsal columns Petren,[1] from a collection of reports of a large number of cases, concluded that impressions of pain and temperature pass through the opposite lateral column, and of the muscle sense through the homolateral dorsal column, while two paths are open to touch, one through the uncrossed exogenous fibers of the dorsal column, and another in the opposite lateral column

Head and Thompson[2] confirmed these conclusions and showed that the ability to recognize the simultaneous contact of two compass points depends on impulses traveling through the homolateral dorsal column Head and Holmes[3] found that the appreciation of weight and recognition of size and shape are frequently lost on the paralyzed side, and concluded that the impulses which subserve these functions ascend uncrossed through the dorsal columns Egger[4] has shown that the sense of vibration of a tuning fork depends on the integrity of the dorsal columns

Recently Petren,[5] from a review of ninety-four cases of stab wounds of the spinal cord, has concluded that fibers for pain and temperature sense have their course near the lateral column of the cord For touch two pathways are present first, in the posterior columns in the long exogenous fibers and, second, in the crossed lateral columns somewhere along with pain and the temperature sense The fibers for muscle sense do not run in a crossed tract, they run in two columns, one in the homolateral posterior columns and the other in the lateral cerebellar bundle They run mediad to the fibers for pain and temperature and laterad to the pyramidal tract

From the notes of forty-five cases of spinal injuries of warfare in which the Brown-Sequard syndrome occurred, Holmes[6] found that the upper limit of anesthesia to the different forms of sensation varied, and that as a rule the upper border of the contralateral loss did not correspond to the segmental level of the injury In the middorsal region, the crossing of pain and thermal impulses is complete in one segment Thermal impressions cross less rapidly than those of pain, and touch requires two segments for decussation In the upper dorsal segments, pain and temperature cross in two and frequently in three segments At the fourth cervical segment the decussation of pain requires from five to six segments, and that of thermal impressions from four to five

Holmes concludes that the fibers which convey impression from the lower spinal roots are probably placed lateral to those which have later reached the contralateral side

---

* Read before the Chicago Neurological Society Dec 21, 1916

[1] Petren Skandin. Archiv f Physiol 1902 **13**, 9

[2] Head and Thompson Brain 1906 **29**, 537

[3] Head and Holmes Brain 1911 **34**, 102

[4] Egger Rev neurol 1902 **10** 549

[5] Petren Neurol Centralbl Jan 2 1916

[6] Holmes Brit Med Jour Dec 11 1915 p 855

REPORT OF CASE

Oct. 1, 1916, a man, aged 27, whose previous history has no bearing on the present condition, and in whom the Wassermann reaction was negative on the blood serum, was stabbed in the left groin, the left buttock, and in the back of the neck. The wound in the neck extended from the fifth to the seventh cervical vertebrae. The right leg was immediately paralyzed For three days the patient complained of severe shooting pains in both arms He was unable to move the right leg for four days, then movements of the thigh and leg returned, and on the sixth day he was able to get out of bed, and more or less rapidly regained all function except dorsal flexion of the foot and extension of the toes He remained in the hospital until October 18, and was examined five days later

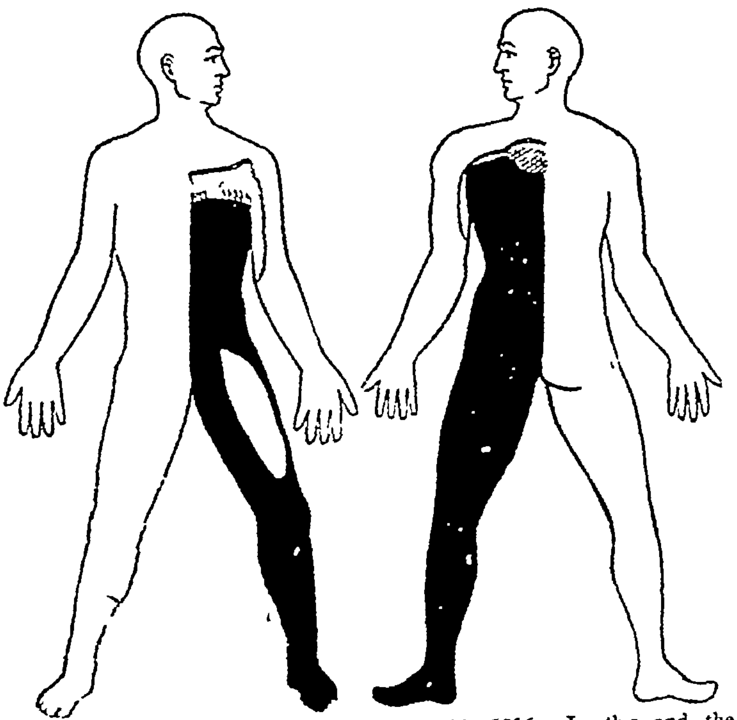


Fig 1—Sensory chart, obtained Oct. 23, 1916 In this and the accompanying illustration, oblique solid lines indicate areas of thermanesthesia, oblique broken lines, diminished temperature sense, vertical solid lines, diminished pain sense, solid black areas, loss of pain and temperature sense, within the area bounded by the double line is found a diminution in the acuteness with which pain and temperature are appreciated, the blank space over the left leg represents a loss of sensation in all its forms

He showed a weakness of the muscles of the right side of the body below the level of the fifth and sixth cervical segments, the groups represented by these levels were more markedly affected than those of the fifth alone, as the deltoid especially, and the pectoralis major, supinator longus and biceps were feeble, and the supraspinatus, teres minor, subscapularis and serratus magnus were probably not affected The muscles representing the lower levels were still weaker, the greatest disability being in the extensor of the index finger, the opponens pollicis and the first dorsal interosseus The motor disability was most marked in the lower extremity, where the dorsal flexors of the foot and extensors of the toes showed the greatest weakness The right side of the abdominal wall was paretic Ankle and knee clonus were present on the right side, the rectus jerk was greater on the right side The deep reflexes in the upper extremities were equal and about normal, with the exception of the right scapulohumeral, which was increased A Babinski phenomenon was present on the right side. The right cremasteric and abdominal reflexes were absent. The sympathetic and organic reflexes and vasomotor functions apparently were normal on both sides The pupils were normal Sensation to touch was disturbed only over the area supplied by the anterior femoral cutaneous nerves of the left side They had probably been severed by the stab wound in the groin There was an analgesia of the left side below the level of the third dorsal segment. For a short distance above this, pain sense was diminished, and below the fourth cervical segment, although very slight pain stimuli were felt on the left side, the sensation which they awakened was more acute on the right side. Temperature sense was lost to a level slightly higher than the third dorsal, and for a small band above this was diminished. As with the temperature sense, as high as the level of the fourth cervical segment temperature stimuli were more acutely on the right than on the left side. The slightest stimulation, however, was correctly interpreted on the left side in this area Over the arm only that portion represented by the second and third dorsal segment showed a similar condition as to pain and temperature Joint and muscle sense were apparently normal, but slight pallesthesia was present on the right side No difference in tactile space sense existed

Since the time of examination an improvement has been noted in the motor functions, the same muscle groups, however, are affected and in similar proportions The thermal anesthesia has retreated caudally so that the upper border is at the sixth dorsal level Above this to the fifth dorsal either heat sense alone is lost, or heat and cold slightly diminished. Analgesia likewise has retreated caudally to a level lower than the thermal anesthesia, namely, the eighth dorsal segment. Up to the level of the sixth dorsal, pain sense is diminished The same acuteness of sensation to heat and pain is present in the area of the right side as was noted at the first examination.

COMMENT

This case is of particular interest because of several features

1 The low level of the crossed sensory disturbance as compared to the direct motor injury illustrates the obliquity of the crossing of the sensory fibers, as pointed out by Gordon Holmes

2 The caudal retreat of analgesia, and more slowly of thermal anesthesia, indicates a lamellar arrangement in which the fibers that convey impressions from the lower spinal roots are placed laterad to those that have later reached the contralateral side

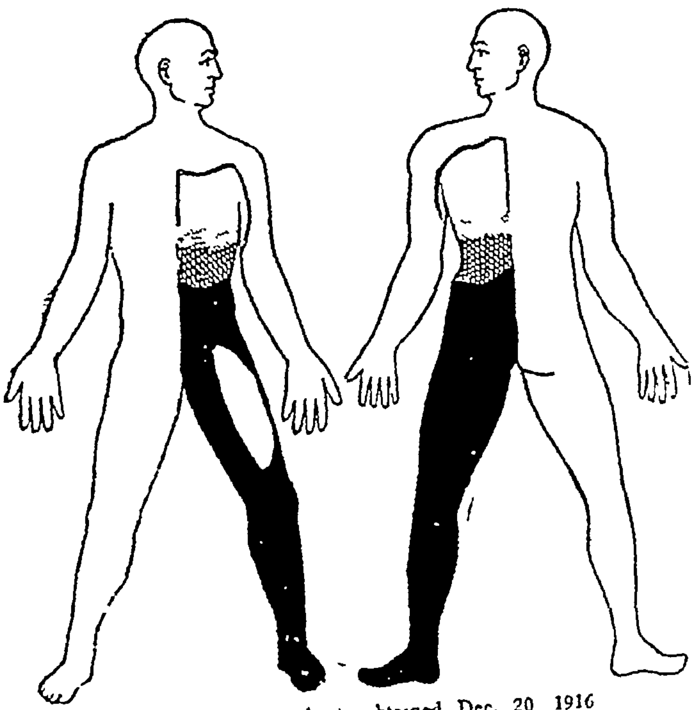


Fig 2—Sensory chart, obtained Dec. 20 1916

3 As the upper margin of the anesthesia to heat is slightly higher than that to cold, it is probable that the afferent impulses which subserve the latter decussate more slowly

25 East Washington Street.

Actions, not Words—A slender acquaintance with the world must convince every man, that actions, not words are the true criterion of the attachment of friends—George Washington

TETANUS, WITH SECONDARY MULTIPLE NEURITIS

REPORT OF A CASE WITH RECOVERY *

W. W. RICHARDSON, M.D.
MERCER, PA.

M. J., man, aged 19, Italian, laborer, who spoke little English, and whose family history and previous medical history were unascertainable, had received a rather slight lacerated wound of the left ring finger ten days prior to admission to the sanatorium, which occurred, Feb. 20, 1915. The finger had not been cared for properly. The patient was apparently delirious on admission, and it was because of these mental symptoms, the cause of which had not been ascertained, that he was sent to the sanatorium. He had a general convulsion shortly after admission. In my absence, the diagnosis was correctly made by Dr. R. M. Hope, who thoroughly opened and disinfected the wound. The patient later was resistive and attempted to bite and scratch. The temperature was 102 by rectum. Three thousand units of tetanus antitoxin were given subcutaneously by Dr. P. T. Hope later in the evening together with morphin and chloroform. The patient had no further convulsions until the next morning at 10:30. He was placed on hypodermic injections of 10 minims of 2 per cent. solution of phenol (carbolic acid) every two hours, and chloral and bromid by the rectum according to circumstances. He had another convulsion at 5 a. m. on the third day, opisthotonos being marked in this and in most of the succeeding convulsions. He had another seizure at 9:30 a. m. As difficulty was experienced in securing antitoxin, the second injection of 9,000 units, given subcutaneously, was not received until forty-eight hours after the first. Morphin in one-fourth grain doses was given to alleviate pain, from which the patient suffered intensely at intervals, apart from the convulsions. On the fourth day at 4 p. m., 5,000 units of antitoxin were given intradurally after lumbar puncture, and 3,000 units were injected at the seat of the injury in the finger. Bacteriologic and cytologic examination of the spinal fluid (15 c.c.) withdrawn on this occasion was negative.

As no convulsions appeared after the third day and the patient's general condition was improved, 5,000 units were given intraspinally and 5,000 units intravenously on the fifth day, no antitoxin on the sixth day, 7,000 units subcutaneously on the seventh day, and 5,000 units subcutaneously on the eighth day, it being felt that the disease was now under control. This was an error, however, as two convulsions occurred on the ninth day, after five free days. From the ninth to the seventeenth days thirteen convulsions occurred, most of which were severe. During this period from 5,000 to 15,000 units were given daily chiefly by the intravenous and intraspinal routes. Two subdural injections of 4 c.c. each of magnesium sulphate solution (7 gm., 2 cg. to 100 c.c. distilled water) were also given during this period (the fourteenth and sixteenth days) with seemingly beneficial results. On the eighteenth, nineteenth and twentieth days, no convulsions occurred and only 5,500 units of antitoxin were given during this period. Mild convulsions reappeared, however, and occurred daily from the twenty-first to the twenty-fifth days. During this period only 10,000 units of antitoxin were given, as the convulsions were noted to be diminishing in severity and the patient was beginning to show serious paralytic (or perhaps anaphylactic) symptoms, such as dysphagia and very slow, weak and irregular heart action. There were no convulsions after the twenty-fifth day. On the fifteenth day the left forearm and hand were found to be much swollen, and on the twenty-first day much pus was evacuated from an abscess in the elbow region evidently due to infection from one of the intravenous treatments. The hypodermic injections of 2 per cent. solution of phenol were continued throughout the treatment save on two occasions when it had to be stopped for a couple of days to permit the urine, which had become very smoky, to clear up. Chloroform was used only when the intradural injections were given.

Three weeks after the last convulsion, it was noticed in bathing the patient that he was very sensitive to pressure or touch in his arms. This soon extended to the limbs. Examination revealed extreme tenderness along the peripheral nerve trunks as well as general hyperesthesia. This condition was accompanied by loss of power in the extremities and general atrophy of the muscles, so that the patient became extremely emaciated. The hands were swollen at first, but this gradually subsided. There was difficulty at times in swallowing. Trophic changes were not marked, though the patient had to be watched closely to prevent bedsores, and was manifestly suffering from a generalized peripheral neuritis. The presence of anesthesia could not be definitely determined because of the patient's mental condition. Under massage and good feeding the condition began to improve slowly after two weeks. At the end of a month from the beginning of this complication the patient had so far improved as to be able to walk a little with assistance.

In connection with these physical evidences of neuritis there was an abnormal mental condition, characterized by a tendency to grin in a silly manner and to general emotional instability. This condition gradually passed off as the physical condition of the patient improved. He was discharged as convalescent, May 26, a little over three months after admission. He had not fully recovered from his neuritis when he was discharged, and was unable to work for about two months after returning home. He called recently at the sanatorium to state that he was working every day and had fully recovered his usual health.

COMMENT

In this case the effect of the antitoxin is well worth studying. In all, 152,500 units of antitoxin were given, 45,000 units in nine doses subcutaneously, 56,500 units in nine doses intraspinally, and 51,000 units in eight doses intravenously. After the subdural injections on the fourth and fifth days and the intravenous injection on the fifth day, there were no more convulsions for five days and the patient's general condition was greatly improved. The treatment, however, was not continued by these methods, two subcutaneous treatments were given on the fourth and fifth free days, with the result that convulsions began next day and the disease became more aggravated. Had the subdural and intravenous treatments been continued daily, I feel convinced that the disease would have ended at this point. The results here, therefore, are in harmony with those of Park, Irons[1] and others who have found the combined treatments by the various routes mentioned much more efficacious than the subcutaneous treatments alone.

Undoubtedly the most interesting question, however, is as to the etiology of the neuritis. The possibilities are: (1) toxic action from the antitoxin, (2) the infection of the arm, or (3) toxins arising from the action of the tetanus bacilli.

As to the first point, although antitoxin was used in considerable quantities, neuritis is not regarded as one of the allergic phenomena to be expected, although the patient showed at times symptoms possibly ascribable to anaphylaxis, such as respiratory and cardiac irregularity and weakness.

Secondly, while infection is a possibility, it seems unlikely in view of the fact that the infection was local, it did not cause severe constitutional symptoms, the pus was promptly evacuated, and the abscess was kept well drained.

In view of the severity and duration of the attack, it seems most probable that the neuritic symptoms

---

* Read before the Pittsburgh Neurological Society, Oct. 10, 1915.

[1] Irons, E. E.: The Treatment of Tetanus by Antitoxin, The Journal A. M. A., June 27, 1914, p. 2025.

resulted from the toxins generated by the tetanus bacilli Although, in view of the frequency of neuritis following diphtheria, we might expect it in tetanus, as a matter of fact it has been rarely reported and there is almost no literature on the subject

Anders[2] speaks of paralysis as being a rare sequel, but does not particularize as to the nature of such paralysis as has been observed He mentions also the significant fact that Kitasato has produced paralysis in man by injecting tetanus toxin into the femoral vein

The only article found on the subject was that of Hnatek[3] He reports the case of a woman, aged 54, who developed traumatic tetanus After two weeks she began to improve, but at the beginning of the fourth week she developed severe pain in the left shoulder, followed by pain, swelling and later numbness of the left hand The condition improved under treatment It is noteworthy that this patient was not treated with antitoxin

Hnatek, in commenting on the case, states that while Goldscheider[4] considers that changes in the peripheral nerves from tetanus are impossible, there is no doubt that the peripheral nerves sometimes react to the tetanus toxin After discussing at some length the possible mechanism of trophic changes in neuritis he says

> The fact that neuritic symptoms appear after an injection of antitoxin, as well as without it, speaks for the tetanotoxin as the etiologic basis of the neuritis But why is the action of the tetanotoxin so rarely accompanied by an inflammation of the nerves, and why doesn't it act at the time it passes through the nerve? There can be only this explanation, that a long duration is necessary to produce inflammation If the tetanotoxin is really the cause of the neuritic phenomena, there is no other possibility than this, that a long contact with the nerves is necessary

I feel that Hnatek has reached the most probable explanation of these cases It is the protracted cases of tetanus ending in recovery that are apt to be followed by neuritis, as it is only in such cases that the toxin has the opportunity to act for a sufficiently long time to produce neuritis as a sequel It seems to me most probable that under the newer methods of treating tetanus, and as protracted cases with recovery become more numerous (as they no doubt will), we shall have more reports of tetanus cases followed by neuritis

SUMMARY

An Italian, aged 19, developed tetanus about the tenth day following a lacerated wound of the finger Under treatment by antitoxin, magnesium sulphate and phenol he showed two periods of temporary improvement, finally on the twenty-fifth day ceased to have convulsions, and developed neuritic symptoms in the arms three weeks later, this rapidly developing into general peripheral neuritis After two weeks he began to improve, and by the fourth week (of his neuritis) had regained sufficient power to walk slightly Approximately 150,000 units of antitoxin were used, divided nearly equally among the subcutaneous, intravenous and intraspinal routes The most probable cause of the neuritis was the tetanotoxin

SPONTANEOUS RUPTURE OF UTERUS FOLLOWING ADMINISTRATION OF PITUITARY SOLUTION

REPORT OF TWO CASES

WILLIAM WERTENBAKER, M D
Obstetrician to the Delaware Hospital
WILMINGTON, DEL

Within twelve weeks of each other there have been admitted to the obstetric ward of the Delaware Hospital two patients with spontaneous rupture of the uterus, following the administration of a single dose of pituitary solution These would seem worthy of more than passing interest since the widespread advocacy of the use of this agent in labor

These two cases bear a marked resemblance to each other in their salient features In neither was there any intra-uterine manipulation, attempted version or use of forceps In neither case had true engagement taken place, but the presenting part was well within the pelvic brim, and otherwise they met the usual indications for the use of pituitary solution Both patients were multiparas, in both, dilatation of the cervix was complete, the membranes ruptured, the fetus presenting by the vertex, with the uterine contractions weak and inefficient Each patient received only a single injection of one ampule (1 c c) Routine pelvimetry was not carried out, but both pelves were practically normal and the conjugata vera, as estimated at operation, at least 10 cm in each

After operation, both babies were found to be somewhat above the average size, one weighing a little above and the other a little below 4,500 gm (9 9/10 pounds).

REPORT OF CASES

Case 1 —*History* —M W, colored, aged 44, quattuordecipara, whose previous labors had been spontaneous, was admitted to the Delaware Hospital about 7 p m, Dec 19, 1916, and the following history obtained from Dr J B Stubbs The dates of the last menses and of quickening were unknown Labor was expected about December 1

Late in the afternoon of December 18, the patient fell into labor, and a midwife was called The pains were weak and irregular, and much homely stimulation in the form of coffee, whisky, etc., was given throughout the night and following day About 4 30 p m, December 19, Dr Stubbs was called, and found the woman exhausted from her long labor, the pains weak, the abdomen pendulous, the cervix fully dilated, the membranes ruptured, and the vertex presenting and well within the pelvic brim

He administered hot milk to the patient, placed her in a semirecumbent posture, and injected hypodermically one ampule of pituitary solution In from five to ten minutes, while holding his hand over the fundus of the uterus, he noted a "sudden giving away" The patient immediately complained of sharp pain in the abdomen and "air hunger" The uterine pains ceased, and cold sweat, ashy color, pinched features and the other signs of shock appeared Hemorrhage was steady from the vagina but not large in amount Vaginal examination revealed that the head had receded above the symphysis The physician gave a diagnosis of rupture of the uterus and advised immediate transfer of the patient to a hospital, but a delay of an hour or more was entailed in obtaining the consent of the family

Examination —The findings as given above were confirmed, the patient was taller and heavier than the average the abdomen was pendulous and relaxed, the fetal head below and riding free in the abdomen above the symphysis the small parts palpable just beneath the abdominal wall Fetal movement and heart sounds could not be elicited Bleeding from the vagina was moderate in amount bu steady, the cervix irregular in outline and flabby, a long anterior lip being palpable just below and posterior to the fetal head Immediate section was decided on

---

[2] Anders, J M Tetanus in Osler's Modern Medicine, 1, 580

[3] Hnatek, J Tetanus and Neuritis, Wien med Wchnschr 1905, 55, 997

[4] Goldscheider Ztschr f Klin Med, 1894

Operation—A low median incision, from 12 to 14 cm, was made The dead fetus lay just beneath the incision free in the peritoneal cavity A foot was seized and extraction performed The placenta, which was still within the uterus, was removed There was present a large rent in the left broad ligament, extending to and continuous with a tear completely through the uterovesical fold of peritoneum, thus leaving the large anterior lip of the cervix free from all attachments The vessels of the left side were caught and ligated After ligation of the infundibulopelvic and round ligaments and the uterine artery on the right, the uterus was freed from its attachments, the attached posterior portion of the cervix incised supravaginally, and the uterus with its adnexa removed The pelvis was drained below, and the peritoneal toilet completed as is usual The abdomen was closed in three layers The patient died about an hour after the completion of the operation

Case 2—*History*—B K., aged 26, Austrian, quintipara, whose previous labors had been spontaneous was admitted to the Delaware Hospital between 10 30 and 11 a m., March 8, 1917 I was called into this case through the courtesy of my colleague Dr Willard Springer, who was in charge of our service at that time The following history was obtained from Dr S M Zion The dates of the last menses, of quickening and of expected labor were unknown According to the history given Dr Zion by the midwife in attendance, the patient fell into labor about 1 p m., March 7 Throughout the afternoon and night the pains continued, but were weak and inefficient At 5 a m, March 8, he was called, and on examination found the woman having regular but ineffectual pains, the head below the cervix fully dilated, the membranes ruptured, and the vertex presenting and below the pelvic brim At 5 20 a m he administered hypodermically one ampule of pituitary solution This was followed promptly by the onset of vigorous uterine contractions, but after a few minutes (three or four pains) there was a sudden cessation of the uterine contractions and the onset of the symptoms of shock, rapid, thready pulse, ashy hue of the skin, anxious pinched face, sighing respiration and cold sweat Hemorrhage from the vagina for a while was free, and the head of the fetus was found to have receded above the brim of the pelvis, just in front of the head he noted an irregular mass (the torn anterior lip of the cervix) He called in a consultant (myself), but before my arrival the family called Dr J B Stubbs, who gave a tentative diagnosis of rupture of the uterus and advised immediate transference of the patient to a hospital

Examination—The findings as given above were confirmed, the abdomen was large and irregular in outline, the fetal head below and riding free in the abdomen above the symphysis, the small parts were palpable just beneath the abdominal wall Neither fetal heart sounds nor fetal movements could be elicited There was slow steady bleeding from the vagina A rent in the cervix could be felt extending from the right posterior portion below, upward and to the left into and through the broad ligament of the left side, the head could be palpated through this rent above the symphysis Immediate operation was decided on

Operation—A low median incision, from 12 to 14 cm., was made The dead fetus was free in the peritoneal cavity just below the incision A foot was seized and extraction performed The placenta, which was lying loose within the uterus was removed A large tear extended from the contraction ring downward through the lower margin of the cervix and outward through the left broad ligament, involving the uterine artery and vein of the left side and the left infundibulopelvic ligament Bleeding points were caught and ligated The uterus with its adnexa was freed and removed supravaginally The rent in the remaining portion of the cervix was brought together with a running chromic catgut suture the pelvis drained below, the stumps of torn and severed ligaments sutured to the cervical stump, and all torn and cut surfaces closed over with peritoneum An inflamed appendix containing three large fecal concretions was removed The abdomen was closed in three layers and the patient removed to the ward in fair condition

The external pelvic measurements, taken after operation, were between spines, 27 cm , between crests, 29 cm , between trochanters, 31 cm , right oblique, 23 cm , left oblique, 23 5 cm , external conjugate, 20 5 cm , circumference of pelvis, 91 cm

The patient made a comparatively uneventful recovery and was discharged from the hospital on the twenty-first day after operation

---

PUBLIC HEALTH INSTRUCTION IN MEDICAL SCHOOLS

M J ROSENAU, M D
Professor of Preventive Medicine and Hygiene, Medical School of Harvard University Director of the School for Health Officers Harvard Technology
BOSTON

We now take it for granted that public health instruction should be included in the medical curriculum This assumption, so easily and unanimously acquiesced in today, would not have found sympathetic approval in yesteryears

Most medical schools have not met their full responsibility with reference to the teaching of hygiene Only four or five medical schools in this country treat hygiene as a major subject By a major subject I mean one taught by a well equipped department with a staff on a full-time basis, with adequate facilities for teaching and investigation, with a fair allotment of time in the curriculum, and a required course in which credit must be obtained for the M D degree It must come as a surprise to learn that the only medical schools that meet these requirements in part are Pennsylvania, Yale, Michigan and Harvard

We must keep clearly before us that the purpose of teaching public health in medical schools is not to make health officers of medical students, but to broaden their training so as to fit them better for the practice of medicine I am not in sympathy with the views of many teachers of special fields that their particular specialty is the most important in the medical curriculum Medical schools have a clear-cut purpose, to train men in the fundamental sciences and in the clinical methods that are necessary for success in the responsible service of ministering to the sick Chemistry is not taught in medical schools with the object of making chemists of the students, for the training of chemists as well as of sanitarians requires long and exacting tutelage in special schools devoted to these particular purposes On the other hand, while the physician need not be a sanitary expert, he has many sanitary duties to perform, and must understand and be in sympathy with public health work He cannot meet his obligations or reach his full measure of usefulness without a knowledge of hygiene, preventive medicine or public health, call it what you will

In this paper I shall limit myself to a discussion of undergraduate instruction in hygiene in medical schools, that is, only to required work in public health leading to the M D degree Special training for a public health career requires special courses and even special schools The importance of training health officers deserves the recognition which it is getting Thus, we have the School for Health Officers of Harvard University and the Massachusetts Institute of Technology, we shall soon have the Institute of

Hygiene at Johns Hopkins, which is now in the making Furthermore, a number of schools offer courses leading to the Doctor of Public Health degree (Dr P H), and to the Certificate in Public Health (C P H), and similar degrees All this is another story, and should not be confused with our present problem of instruction in public health in medical schools for students who are preparing themselves to be practitioners of medicine

With this in view, teaching hygiene in medical schools may be considered under several headings to impart a point of view, to teach facts, the course itself, to cooperate with forces within and without the medical school, to stimulate investigation, and to develop aptitudes

THE POINT OF VIEW

When a patient consults a physician, he wants to know two things first, "What is the matter with me?", second, "What can be done to relieve me?" The successful doctor must therefore be expert in diagnosis and the use of remedial measures To become and remain a competent diagnostician and a skilled therapeutist requires the same concentration of effort that makes for success in any special field of human endeavor Many medical schools accept this function of the physician as final, and devote most of their time to the recognition of disease and to the "practical" art of treatment

The medical student clearly foresees that he must become a specialist in diagnosis and treatment His clientele expects this, and for this reason some students are overanxious to prepare themselves in a narrow and restricted sense Medical schools often meet this situation by making the courses as "practical" as possible, but a practical art based on an insecure knowledge of the fundamental sciences reduces a profession to a trade

The teaching of hygiene may then be used as one of the means to broaden the point of view of the medical school and to widen the horizon of the medical student The advanced practitioner of medicine is fast adding prevention as one of the necessary tools of his equipment Hence, the future student of medicine should make a study of health and its maintenance, as well as a study of disease and its relief

The point of view of the practitioner of medicine is largely personal and particular, while the point of view of the sanitarian is more communal and general But there is much overlapping and interlocking, for while the community suffers from infections which may be suppressed and avoided by public measures which largely disregard the individual, it is gradually being borne into the consciousness of health officers that one of the most important protections against disease is personal hygiene and individual education Thus, many communal fevers and infections may be altogether prevented by the use of clean water, safe milk and satisfactory foods In a modern city the individual cannot possibly get these things for himself, and therefore they should be secured for him On the other hand, personal hygiene becomes the keynote in the prevention of syphilis, gonorrhea, and to a large degree of tuberculosis and many other infections contracted mainly by direct personal contact Furthermore, the object of preventive medicine is not alone to control the communicable diseases, nor is it altogether to prolong life but to make life more efficient Here, again, personal hygiene, education, and the individual rather than the community organization is important Public health is merely individual health in the aggregate It is altogether fitting and proper to regard the practitioner of medicine as responsible for individual and family health, which in the mass represents public health Medical practice can no longer be carried on in cloistered seclusion, for the individual malady must be considered with reference to the common weal The relation of the individual to the community, both in sickness and in health, is one of the points of view which must be taken into account in the training of a physician

For a long time the medical profession studied disease only after it had reached the threshold of disabling manifestations The beginnings of many diseases that do not start sharply are still imperfectly understood Disease as a terminal condition is still the point of view of the laity Formerly, people waited until they had toothache before they consulted a dentist The situation in medicine is precisely the same today People wait until they are laid low by fever or pain before consulting a physician For the sake of the patient and for the cause of prevention, lead poisoning must be recognized long before wrist drop, a blue line on the gums and colic make their appearance Many men in middle life now want physicians to tell them how to delay hardening of the arteries, how to prevent Bright's disease, cancer, diabetes, etc In medical schools so little emphasis is placed on the causes and beginnings of disease that few physicians have the necessary skill and experience successfully to examine and advise individuals in this situation Here, again, the medical school in many of its departments must meet a responsibility, or be found wanting The borderline between health and disease, and the causes which lead up to the derangements of metabolism and the slower degenerative processes are pressing problems In a way, it is one of the functions of the department of hygiene to stimulate interest in these matters in the medical school

The young medical practitioner soon will find to his embarrassment that after he has made a diagnosis and written a prescription, he will be asked many questions concerning personal hygiene and the modes of spread of disease, also points regarding sanitation and relations to public health administration which he is expected to know, and which, in fact, he should know, for the practitioner of medicine is the family health officer The medical profession has in the hollow of its hand the power to carry the message of prevention into the household Properly qualified practitioners are blessed with the power of immeasurable service in the prevention of much suffering and unnecessary illness The doctor is constantly asked questions concerning diet, exercise, clothing, rest and ventilation, and he is supposed to be familiar with the laws of heredity and the purposes of eugenics He should be the friend and adviser of the young concerning sex hygiene and the baneful effects of alcohol He will be asked by mothers how to guard their children against infections Busy practitioners of medicine are constantly being consulted, often in private conversation, by legislators and responsible citizens who seek advice on public policies in questions of child welfare, medical inspection of schools, industrial hygiene, vital statistics, or the best forms of health administration The public welfare often hangs on a casual opinion given offhand by the overworked practitioner Many doctors have the courage to say they "do not know" when the question is outside the scope of their special knowledge. There is no reason, however, why all students who are now passing through the medical schools should not be well grounded in the principles of the sanitary sciences and the art of prevention, and I think this is one of the points of view clearly to be kept in mind in public health instruction in medical schools. At one time, the doctor was both priest and healer, he has always been consoler, and now has become teacher.

The social and economic bearing of disease is another point of view which must be considered. The young practitioner of medicine will soon learn to his sorrow that medical science has its limitations, and that life and health itself are often purchasable. He will find for instance, that after he makes a diagnosis of his first case of tuberculosis, it is easy enough to give medical advice to the patient. Even the laity understands that rest, good food and fresh air are the important factors in the cure of this disease. Two difficulties, however, will at once present themselves: one, how to obtain these things, and the other, what measures to advise the family to carry out with reference to the contagious nature of the disease. Since the communicability of the disease has been recognized, it has become one of the greatest homebreakers of all the diseases. To obtain isolation, however, it is not always necessary to disrupt the family. In order to avoid unnecessary hardships and even to avert family disaster, the practitioner must at least be forewarned and understand the social phase of the situation, as well as the use of expectorants and narcotics. Again, many ailments are brought on, or aggravated, through occupation, and to render full service to his clientele, the practitioner of medicine must have a clear understanding of the occupational diseases, with reference to the needs of his patient.

The relation of the practitioner of medicine to the health department is one of the points of view which must be made clear in the medical school, and this duty falls especially on the department of hygiene. The medical profession is one of the most important links in the sanitary chain. The efficiency of any system of health administration depends on the cooperation of a trained group of skilled physicians, acting independently and collectively. The prompt recognition and reporting of cases of communicable disease are points in question, for the control of infection rests primarily on the ability of the physician to make an early diagnosis and his willingness to notify the registrar at once. Furthermore, the physician must be alive to the importance of announcing doubtful and suspected cases, and must look for mild and abortive cases of disease, as well as carriers, so that proper preventive measures may be instituted. The whole burden of correct morbidity and mortality reports rests ultimately on the medical profession. Every physician should regard himself as an agent of the health department. In return, he utilizes the health department in many of its activities, and the advantages of this relationship should be made clear in the public health course in all medical schools.

It is plain to some that, while a physician's daily duty is to care for sick individuals, his responsibility does not end here, for he must extend his services to the community. Thus, the physician today is not called in solely to treat typhoid fever, but to treat the individual in such a way that the infection will not spread. This is one of the points of view which again and again must be repeated, not only in the course in hygiene, but in other courses in the medical school, for the private physician has in truth become a public official. Physicians are wanted today who are able not only to minister to individuals while they are sick, but also to protect the family and the community.

The teaching of preventive medicine and hygiene in medical schools, then, must be used to broaden the point of view of the practitioner, to emphasize his duty to the profession and the public, and to instil into his mind the fact that he is both private practitioner and public servant, that he must qualify himself to teach the art of hygienic living, and be a leader in the community welfare, that he is teacher as well as consoler, that he must understand the social and economic bearings of disease, that prevention is part of the day's work, and that he must consider the study of health and its maintenance, as well as the study of disease and its cure, and finally that he is ex officio an agent of the department of health.

There are still other special points of view which can be given the student, even in a medical curriculum now so overcrowded that it would seem impossible to add further topics. It will be shown presently, however, that readjustments can be made to meet this situation in a satisfactory manner, and without much extra time, through cooperation with other departments.

TEACHING THE FACTS: THE COURSE ITSELF

Teaching the bare facts is perhaps the simplest, though by no means the easiest, task in a course of hygiene. The fundamental data concerning the modes of spread of the infectious diseases and the means of their prevention which science and experience have demonstrated as most efficient must obviously be included in the course. Special prophylactic measures, such as vaccination, specific inoculations, use of antitoxins and other specific protective measures should be demonstrated and practiced by the students in the course in public health, if not taught in some other department in the medical school. The essential facts concerning venereal prophylaxis and sex hygiene, as well as heredity and eugenics, should be made known to every medical student. The important facts concerning milk and other foods, air and ventilation, water purification, disposal of sewage and wastes, vital statistics, personal hygiene, industrial hygiene, health inspection of schools, disinfection and military hygiene can all be summed up concisely and sufficiently to medical students in a brief course, provided they have a secure background of the medical sciences. The course in hygiene, therefore, must come after the student has learned normal structure and function, and pathologic structure and function, including some bedside acquaintance with disease itself. We now take it for granted that all medical students have some information concerning physics, chemistry and biology before taking up medical work. With proper preparation, the course in hygiene does not require as much time as may be feared by makers of the medical curriculum, nor is it necessary to do more than touch on the high points, leaving exhaustive consideration of each subject to those who desire to specialize in public health work in elective courses or special schools.

At Michigan, Chicago and Harvard the course in hygiene comes in the second year of the medical curriculum, while at Pennsylvania, Yale and Columbia the subject is given in the third year.

The successful teaching of hygiene demands a combination of methods: lectures, demonstrations, quizzes, laboratory exercises, sanitary surveys and excursions. The lectures are perhaps the least important part of the methods of instruction in hygiene, and from forty to fifty hours are a fair allotment of time for this part of the program. Vaughan at Michigan devotes forty-eight hours to lectures and demonstrations; Park at Columbia, fifty hours to lectures and quizzes; Abbott at Pennsylvania, thirty-two hours to quizzing and discussion, and at Harvard I devote thirty-two hours to lectures and demonstrations. In the lectures, the time should be taken up with expounding the broad principles rather than the details of the subject. Hygiene touches elbows with all other subjects, and the subject therefore affords an unusual opportunity to correlate and tie together the varied information with which the student is struggling. In the lectures, also, the different points of view can be explained and opportunity taken to fire the imagination for investigation and to inspire the ideals of prevention.

The backbone of any course in preventive medicine should be the sanitary survey and the laboratory exercises. Every student at Harvard Medical School is required to take the laboratory course and to make a sanitary survey of some city or town. The value of the sanitary survey as a pedagogic instrument has been set forth previously,[1] and need not be repeated here. An outline, which is placed in the hand of each student, gives the general plan and scope of this exercise, as carried out in the Department of Preventive Medicine and Hygiene at Harvard.

SANITARY SURVEY OF A CITY OR TOWN

Each student is required to make a sanitary survey of a city or town, and submit a written report, which should consist of (*a*) data; (*b*) interpretation of the facts, and (*c*) criticisms and recommendations.

In the crowded medical curriculum, little time can be spared for an exercise of this character. All the students at the Harvard Medical School, however, have in some way found time. A few afternoons during the course are set aside for the purposes of the survey, and we permit students to do this work Saturday afternoons, Sundays and holidays. A certain amount of the work, such as visiting watersheds and dairies, looking up nuisances, etc., is done in the spirit of a walking excursion or a picnic. Some of the best surveys are done during the summer vacation. Some of the reports prepared by medical students are splendid contributions, giving a complete account of the important sanitary and hygienic features of the place studied. Many of the surveys are enlivened with photographs showing good and bad sanitary conditions; most of them have carefully prepared charts showing morbidity and mortality rates, and some of them have a judicious summing up, with a well considered criticism of the defects in the health administration of the town. The sanitary survey has not yet been adopted generally, but sanitary excursions are made at several medical schools.

Another advantage of the sanitary survey is that it adds much interest to the course in hygiene, and helps brighten the laboratory exercises, especially for those students who sense the "practical" point of view. This correlation between the field work and the laboratory work is accomplished in part by requiring students to make chemical and bacteriologic tests of the water supplied the town they are studying. The same applies to samples of milk, air, and other specimens for sanitary analysis.

The laboratory exercises in hygiene should be selected to include fundamental exercises which give a better understanding of the major topics. Thus, each student, in addition to making a chemical and bacteriologic analysis of water and milk, should establish the phenol coefficient of germicides and do a practical exercise in fumigation; he should make a bacterial vaccine, a sanitary analysis of air, etc. The amount and nature of the laboratory work done in the course in hygiene will depend on how much is already accomplished in other courses in the school. At Harvard there are thirty-two hours of required laboratory work in preventive medicine and hygiene. The laboratory exercises in hygiene are elective at Pennsylvania, Yale, Michigan and Chicago. Laboratory work at Columbia consists of thirty hours in the course of applied bacteriology. We therefore see that the medical school should apportion about 100 hours for lectures, demonstrations, laboratory work and field exercises. Furthermore, sanitary excursions should be offered, and visits made to water purification plants, sewage disposal works, boards of health, antitoxin and vaccine laboratories, and other places of sanitary interest. At present these excursions are excursions both in name and in fact at Harvard, and although voluntary and made on Saturday afternoons, they are usually attended by practically the entire class.

COOPERATION

The department of hygiene has unusual opportunities to cooperate with other departments in the medical school and also with extramural agencies. It is quite hopeless to attempt to teach the whole range of hygiene, sanitation, public health and preventive medicine in one course, however long. The professor of hygiene should attempt to induce the professor of physiology to include personal hygiene in his course; the clinical department can be shown that it is profitable to add clinics on industrial diseases; the department of obstetrics should emphasize ophthalmia neonatorum and prenatal work; the department of ophthalmology should dwell on the causes and prevention of preventable blindness; the department of biologic chemistry should consider diet and food poisoning; pediatricians should be willing to devote sufficient time to a thorough discussion of the causes and prevention of infant mortality and child welfare; the department of psychiatry will find it congenial to include mental hygiene and the problem of feeblemindedness; orthopedic surgeons should include posture and the prevention of deformities; the outpatient department should demonstrate social work; the dental school should be called on for oral prophylaxis; the department of bacteriology can well include board of health laboratory methods; pharmacology can include the action of alcohol and the "patent medicine" evil, and so on throughout every course in the medical school. In this way, many of the facts and much of the ideals of prevention can be given medical students from different angles and with different personalities.

One of the most important functions of a department of hygiene is to stimulate interest in the subject of preventive medicine into the work of the other departments of the medical school. This cooperation has been made easy at Harvard through the School for Health Officers. Many of the members of the medical faculty give special courses in the School for Health Officers, and have shown a willingness to introduce similar exercises expounding the point of view of prevention into their regular medical school courses. Thus, Professor Edsall gives clinics on industrial diseases, Prof. Richard Cabot demonstrates social service work, Prof. W. B. Cannon discusses personal hygiene, Prof. J. L. Morse, infant mortality, Prof. E. E. Southard, mental hygiene, Prof. Reid Hunt, the pharmacology of alcohol and the "patent medicine evil," and Prof. R. W. Lovett, posture and the prevention of deformities. We also enjoy the advantages of cooperation with Professors Strong, Walbach, Ernst, Tyzzer, Mallory, Wright, and other members of the faculty.

---

[1] Rosenau, M. J.: The Value of a Sanitary Survey in the Teaching of Hygiene, The Journal A. M. A., July 24, 1915, p. 321.

No medical school can ever be complete enough to offer facilities to cover the entire field of public health instruction. Cooperation must be established with federal, state and city health departments, and with many philanthropic and semipublic agencies. Milk stations, baby welfare work, antituberculosis societies, psychopathic clinics, institutions for the feebleminded, water and sewage boards, hospitals for contagious diseases, board of health laboratories, quarantine stations, medical inspection of schools, and many other agencies may be utilized with advantage in teaching the subject.

Direct relations should be established especially with the health department, so that the student can see its workings from the inside, and learn at first hand what becomes of birth certificates, death certificates and reports of notifiable diseases, and how the machinery of the department of health operates in the case of nuisances. He should follow the health inspectors on one or two visits, and at least see the diagnostic laboratory, and satisfy himself as to what public health nursing accomplishes. In this way the future physician carries with him throughout his lifetime a keen appreciation of the relations of his work to that of the health department.

In many ways, the department of hygiene has an opportunity to bring the medical school and its work into direct relation with varied activities of the community which may be developed to mutual advantage.

SPIRIT OF RESEARCH

No course in public health can be regarded as satisfactory that teaches the subject with a sense of finality. The student should be left with a clear understanding that some facts seem to be well established, in that they have stood the tests of science and experience. On the other hand, he should be made to realize that a mass of near facts and half truths form the bulk of the subject, and finally, he should be led to the brink of the great unknown and there encouraged to blaze new paths. The imagination of students may often be stimulated by frank presentations of the limitations of our knowledge rather than by attractive and dogmatic expositions. Any course which does not leave in the minds of some students a desire to solve some of its problems has failed to meet its full measure of usefulness. A department of public health must therefore have adequate facilities to offer those students who are fitted by temperament to carry on investigation. These opportunities should be attractively displayed, and the young student, the younger the better, encouraged to try his dreams. The latch string on the laboratory door should hang out. Every class has a few men who will make successful research scholars and can develop the ability to add grains of truth to the sum total of human knowledge. This attitude does not apply alone to the subject of hygiene, for any department of learning in a higher institution which lacks facilities for research will be found wanting. When these facilities are present but not used the situation is pitiful, for there is nothing so contagious as example, and nothing so infectious as enthusiasm.

DEVELOPING APTITUDES

After a boy has made up his mind to study medicine, he has by no means solved his life's problem. The achievements of surgery seem first to appeal to the imagination of most medical students. After the fever to become a surgeon has subsided, medical students begin to think seriously of their career. Medicine probably has more strings to its bow than any other profession. Vocational guidance, therefore, becomes one of the functions of the successful teacher. To discover the inclinations and to develop special aptitudes, in other words, to help young man to find themselves, is one of the satisfying rewards of the teaching profession. Public health work as a career in itself is little understood within and without medical ranks. Every class in the medical school has a few students whose idealism is such that prevention of suffering makes a particular appeal; they at once become happy in the thought that they can have the privilege of consecrating their lives to public health service. The fact that the new profession of sanitation offers uncertain and inadequate material rewards at the present time does not deter those with the pioneer spirit. Such men are endowed with the missionary spirit, and it is not necessary to stimulate souls who dedicate themselves to the ideals of prevention.

Cognizance must be taken of the great changes which are now going on in medical science, medical practice, medical teaching and the relations of medicine to the community life. Adjustments and readjustments are frequently called for. The socializing of practice is marching forward with great strides. It therefore would be a great mistake to provide a rigid or inelastic course in hygiene. Medical schools should be keenly alive to these currents as they ebb back and forth, sometimes with amazing irregularity and rapidity which requires a steady hand and clear eye to pilot the ship *Hygiea* in such uncharted waters. A good pilot will not drift with the tide, but will stear a clear course and reach port, often despite head currents and adverse winds.

Putting It Up to the Legislature.—According to its *Monthly Bulletin* for March, 1917, the Connecticut State Board of Health guarantees to show one life saved for every $500 placed at its disposal. The proposition is that if the legislature grants the $119,000 asked for the board will save 236 lives within the next two years. In doing this it is said considerable unnecessary illness will be prevented and a great economic saving will be effected. On the proposition to save 236 lives it is said that if a human life is valued at $1,700 and it costs $500 to save one the total saving to the state on an investment of $119,000 would be $401,200, or a net profit of $282,200. It is declared that it is the duty of the state to provide for the welfare of its citizens and that it is also its duty to invest its funds to the best advantage. It is therefore asked whether a guaranteed dividend of 240 per cent can be ignored.

A METHOD OF TREATMENT OF MERCURIC CHLORID POISONING *

H B WEISS, M D
Resident Physician, Cincinnati General Hospital
CINCINNATI

In recent years, undoubtedly as a result of sensational newspaper notoriety given to one or two cases, the frequency of mercuric chlorid poisoning has greatly increased Cases of unintentional and suicidal poisoning are continually brought to notice Naturally, the frequency of these cases has been productive of many studies, chemical, pathologic and therapeutic

It has long been known that mercury, when introduced into the body, produces characteristic changes Applied locally, necrosis and sloughing are produced In the body, practically every organ is affected, the secretory and excretory organs bearing the brunt of the damage The drug produces a cloudy swelling, leading to fatty degeneration and necrosis, frequently to hemorrhagic inflammation, and occasionally to subsequent calcification As a part of these changes, an edema of the tissues takes place

Kahn, Andrews and Anderson,[1] in a chemical and pathologic study of a case of mercury poisoning, have shown that the metal is present in practically every portion of the body, the largest amounts were obtained from liver, intestine, brain and kidneys, respectively

Burmeister and McNally,[2] in a histologic and chemical study of the renal and hepatic tissue changes, have found mercury in the blood of dogs ten minutes after small doses of mercuric chlorid were introduced into the stomach In their conclusions, they say

> *In massive intoxication,* immediate renal changes vary with the size of the dose Hepatic changes vary as the duration of the intoxication In smaller doses, renal changes vary as the duration of the intoxication

The classical symptoms of mercurial poisoning are burns, as in the mouth and vagina, stomatitis, nausea, vomiting, oliguria with blood, pus and all forms of casts in the urine, or anuria, anasarca, abdominal distention, and hemorrhages from the mouth, nose, uterus, kidneys and intestine As the condition progresses, the patient may enter into a state of muttering delirium, convulsions, coma and, finally, death

In order to know whether or not we are really dealing with a patient poisoned with mercury, it is necessary to determine if mercury has been introduced into the system This can be determined easily and quickly by the examination of the excretions and secretions

Vogel and Lee[3] have described a simple method We have used this method in practically all our determinations It is said to be so sensitive that the presence of mercury can be detected in the sweat and excreta in the proportion of 1 100,000

Of the methods suggested for the treatment of mercuric chlorid poisoning, the following are among the most important

Anderson[4] advises hydraulic irrigation through a cecostomy wound in the effort to hasten elimination through the intestine

Wilms[5] uses calcium sulphid by mouth and intravenously, he maintains that calcium sulphid is the chemical antidote for mercuric chlorid

Schisler[6] reports a series of sixteen cases, in eleven of which the patients recovered He gave from 30 to 60 grains of magnesium oxid every three hours, with plenty of water, if there was no general edema

Previously, large amounts of water, water restriction, salt restriction, hot packs, hypodermoclysis, and proctoclysis have been used in the effort to overcome the kidney damage

The most successful report of the treatment of mercurial poisoning is that of Lambert and Patterson,[7] who, in a series of sixteen cases, reported but two deaths [3] Their treatment is decidedly vigorous, but apparently has been successful They wash out the stomach twice daily and also give two colonic irrigations daily They give the patient a liquid diet of 8 ounces of milk every two hours, to be alternated every two hours with 8 ounces of the following mixture potassium bitartrate, 1 dram, sugar, 1 dram, lactose, ½ ounce, lemon juice, 1 ounce, boiled water, 16 ounces To supplement this large amount of fluid given by mouth, they give a solution containing 1 ounce of potassium acetate to the pint of water continuously by rectum The approximate amounts are not mentioned The patient also receives a daily hot pack

It is a known fact that patients poisoned with mercury die with all the symptoms of acute nephritis As Fischer[8] has shown, the evidences we get of acute *nephritis are merely an indication of what is going on* throughout the body Just as the kidneys are swollen, so are the other tissues swollen When we find albumin, casts and blood in the urine, we may be reasonably sure that the other organs have undergone damage *similar to the kidneys, that is,* severe cloudy *swelling Anuria develops,* that is, the kidneys do not pass any water along as a result of the severe cloudy swelling and edema Then many of the symptoms appear, as nausea, vomiting and headache, probably depending on edema of the brain

We have used this principle of colloidal swelling, as enunciated by Fischer, as the basis for our treatment We give alkali, hypertonic salts by mouth, by rectum and intravenously Freyhof and I have modified the old English potus imperialis

This modification, which we call "imperial drink," consists of potassium bitartrate, 60 grams, sodium citrate, 30 grams, sugar, 60 grams, with lemon or orange juice to taste, to 8 ounces of water This makes a pleasant alkaline drink, which is best made by placing the potassium bitartrate and sodium citrate into the lemonade just before it is used In conjunction with this, we use intravenous injections of Fischer's solution, which consists of sodium carbonate crystals, 10 gm, and sodium chlorid, 15 gm, to 1,000 c c of water

The treatment begins on the arrival of the patient, which is usually *within* a few hours after the drug has been taken The stomach is washed with 1 quart of milk and the whites of three eggs, followed by water

---

* *From the Department of Medicine, University of Cincinnati, and the Medical Clinic, Cincinnati General Hospital*

[1] Kahn, M Andrews, V L, and Anderson, J H Med Rec, New York, 1915, **88**, 357

[2] Burmeister and McNally Jour Med Research, 1917, **36**, 87

[3] Vogel, K M, and Lee, O I Detection of Mercury in the Excretions, The Journal A M A, Feb 14, 1914, p 532, Med Rec, New York, 1916, **89**, 58

[4] Anderson Surg, Gynec. and Obst, 1915, **20**, 736

[5] Wilms Lancet Clinic, 1915, **114**, 555, ibid, 1916, **115**, 460

[6] Schisler Jour Mississippi State Med Assn, 1917, **14**, 173

[7] Lambert, S W, and Patterson, H S Poisoning by Mercuric Chlorid and Its Treatment, Arch Int Med, November 1915, p 865

[8] Fischer, M H Edema and Nephritis, New York, John Wiley & Sons, 1915

A sample of gastric contents is saved for examination. Before the stomach tube is removed, 3 ounces of magnesium sulphate in 6 ounces of water are introduced and allowed to remain in the stomach. The patient is then given a soapsuds enema. The enema and catharsis rapidly open the gastro-intestinal tract, thereby aiding in the elimination of mercury. If the patient did not vomit immediately after swallowing the poison and did not reach medical aid for at least three hours later an intravenous injection of Fischer's solution is given at once in amount ranging from 1,000 to 1,500 c.c., depending on the condition of the heart of the patient. If there is no evidence of cardiac derangement, 1,500 c.c. of fluid intravenously are readily tolerated without any disturbance. Then the patient receives from six to eight glasses of imperial drink a day, and he is given large quantities of water by mouth. He is allowed a liberal diet — almost anything except an excess of protein foods.

We use the analysis of the urine as the control of the treatment. The patient should void large quantities of urine, as he is taking large amounts of fluid. We endeavor to keep the urine alkaline to a saturated solution of methyl red in alcohol, for Fischer has shown that if the urine of a nephritic cannot be made alkaline to methyl red, this patient continues in a dangerous state. An animal poisoned with mercury is at least a potential, if not an actual, nephritic. Almost all of the patients develop an albuminuria early, but this gradually, or occasionally, rapidly disappears, as soon as sufficient alkali can be introduced into the body to counteract the abnormal amount of acids produced.

We have had complications in only one patient, he developed a severe necrosis of the mucous membrane of both sides of the cheek, and later in the course of the disease he had severe intestinal hemorrhages, in all probability from the colitis produced by the mercury excreted through the bowel. Similar cases were described by Lambert and Patterson.

Up to the present time we can report on fifteen cases personally treated and ten cases similarly treated in other parts of the hospital. The series began in July, 1915, and continues to the present time.[9]

These twenty-five patients were discharged from the hospital, free from any discoverable symptoms of mercurial poisoning. There were no fatalities. The amounts taken by these patients, according to their own statements, varied from 3 to 82 grains of mercuric chlorid, all taken by mouth.

The most serious case was that of a man who took 45 grains. He came to the ward twelve hours later. He had not vomited after taking the tablets. On admission, his stomach was washed, and a soapsuds enema was given. The urine obtained by catheterization was acid to methyl red, and showed a moderate cloud of albumin with granular casts and blood, chemically and microscopically. Twelve and one half ounces of urine were obtained the first day. An intravenous injection of 2,000 c.c. of Fischer's solution was given immediately on admission to the ward.

The patient was urged to swallow as much fluid as he could, but this was very painful, as he had developed a severe mercurial stomatitis. There was a complete suppression of urine for three days following the day of admission. On the third day after admission, he was given 1,800 c.c. of Fischer's solution intravenously. Orthoform powder applied locally diminished the pain of swallowing so that he could take large amounts of milk, water and imperial drink. On the fifth day after admission, the patient voided only 3 ounces of urine, which showed many granular casts and red blood cells, and was strongly acid to methyl red. On the sixth day the patient again voided only 3 ounces. In the meantime, alkali and fluids were pushed by mouth and rectum (Fischer's solution by rectal drip). A slight edema of the ankles developed on the third day, this edema continued to increase so that on the sixth day after admission the patient's face, hands, abdomen and legs were swollen with a soft edema. On the seventh day the patient voided 136 ounces of urine, this urine was alkaline to methyl red, showed a slight cloud of albumin, and scattered granular casts and many red blood cells. Following this large voiding, the patient continued to secrete large amounts of urine, and the edema disappeared. The albuminuria continued for thirty days, after which the urine became normal chemically and microscopically, and remained so until the patient was discharged, fifty-eight days after entering the hospital. On the fourth day after admission, the patient had tarry stools, which continued until the seventeenth day of his illness. The severe course in this case was probably due to the unavoidable delay in instituting the treatment.

The following case is typical of those in which treatment was promptly instituted. A man, after drinking six glasses of beer, and omitting his evening meal, dissolved at least five 7½ grain mercuric chlorid tablets in warm water and drank the solution with suicidal intent. He thinks he vomited about fifteen minutes later. He reached the hospital two and one half hours after taking the poison. His stomach was washed with milk, eggs and warm water, and 10 ounces of saturated solution of magnesium sulphate allowed to remain in the stomach. He vomited a portion of this after several minutes, and more magnesium sulphate was given to him. He was given a simple enema, and, one hour later, an intravenous injection of 1,300 c.c. of Fischer's solution. The urine voided during the night was acid to methyl red and showed no albumin. Later in the day the urine was still acid, and showed albumin, granular and hyaline casts, and blood. Mercury was obtained from the gastric washings and from specimens of stool and urine. The first day he voided 20½ ounces of urine. He was given large amounts of fluid and six glasses of imperial drink a day. The urine remained acid, and showed albumin and casts. He was given a second intravenous injection of 1,200 c.c. of Fischer's solution thirty-six hours after admission, and five hours later the urine was alkaline to methyl red, and no albumin was found. The urine remained clear, and he voided large amounts until he was discharged twenty days after entering the hospital. This man had no complications, such as stomatitis or intestinal hemorrhages, and no disquieting symptoms.

No hard and fast rule can be laid down whether or not to give the intravenous injection, but frequently it can be omitted. If the patient has vomited within fifteen minutes after taking the poison and has taken only about 15 grains, we watch the amount of urine voided and the acidity. If the amount voided is close to normal limits and the urine becomes alkaline on the medication by mouth within the first twelve to twenty-four hours we may omit the intravenous injection of Fischer's solution, but if the urine continues to be acid to methyl red, the intravenous injection must be given without delay, and repeated, if necessary

---

[9] Since the article was written we have treated three more patients one of whom died.

Usually the patient's urine becomes alkaline after three or four days, and remains so The patients are kept under treatment until the urine has been constantly alkaline from ten to twelve days and are then discharged, if no complications have developed[10]

It will be seen from the description given above that our plan of treatment is not essentially different from that of Lambert and Patterson As our observations were begun some months before Lambert and Patterson's work appeared, and as we had obtained satisfactory results without the frequent gastric and colonic lavage recommended by them, we have felt justified in omitting it

Clinical Notes, Suggestions, and New Instruments

TWO CASES OF PERFORATION OF THE NASAL SEPTUM DUE TO THE INHALATION OF ARSENIC TRIOXID

Benjamin Franklin Davis, Ph D, M D, Chicago

Recently I was consulted by a man, married, aged 35, who said that for the past four or five weeks he had been troubled with stuffiness in his nose and a slight nasal discharge, that for the past two or three weeks he had occasionally noticed a little blood on his handkerchief after blowing his nose, and that for the past week, while applying an ointment to the mucous membrane of his nose with a piece of cotton, he had been able to pass the cotton from one nostril to the other through the septum He desired confirmation of his diagnosis of a perforation of the septum

Examination disclosed a hole through the cartilaginous septum, about 1 cm in diameter, not involving the bony septum The edges of the hole were everted, hyperemic and edematous, while the raw surfaces presented a blackened worm-eaten appearance There were no granulations suggestive of healing The mucous membrane of the nose was moderately hyperemic and mucus laden, but not sufficiently so to prevent nasal breathing A Wassermann test on the blood was negative The patient denied venereal disease, and there were no suggestive lesions elsewhere on the body The patient was a chemist and had been engaged for the preceding six months in making an arsenical preparation which involved the grinding and shoveling of from 20 to 50 pounds of arsenic trioxid daily He said that a good deal of the work was new, largely experimental, and that he had experienced considerable difficulty in controlling the escape of the arsenical dust and fumes At first he had been careless, but lately had used every means he could think of to protect himself[1] He further stated that his only companion in the work also had a perforated septum This man was under the care of Dr H B Woodard, who kindly permitted me to examine the patient and to obtain blood for a Wassermann test, which was negative The local condition in the nose was similar to that in the preceding case

In neither of these patients were there symptoms of gastro-intestinal irritation, neuritis, dermatoses, edema of the lower lids or other changes, such as one may see following the ingestion of toxic doses of arsenic Examination for arsenic of one eighteen hour specimen of urine from one patient (Gutzeit test) was negative.

CAUSATION OF PERFORATIONS OF SEPTUM

Of the noncongenital perforations of the septum, probably the majority which the physician treats are either traumatic or syphilitic, certainly the bulk of the cases can be explained on a congenital, syphilitic or traumatic basis In addition, some perforations are the result of careless exposure in the industries, and some, idiopathic Dr Frank Billings informs me that he has studied a number of cases in which, syphilis, congenital defects and trauma being excluded, it was impossible to assign a definite cause for the lesion All were associated with atrophic changes in the nasal cavities, sometimes typical of atrophic rhinitis, and it was supposed that whatever the exciting agent may have been, the primary lesion was a vascular one

Among cases reported from the industries, the only representatives which I have been able to find occurred among employees in bichromate factories and those who were exposed to dust rich in the salts of arsenic

Perforation of the septum due to exposure to the salts of arsenic—the fumes produce systemic but not local effects—appears to be quite common, but the literature is scanty Our knowledge of this condition is thus summarized by Kober and Hanson[2]

> The most characteristic lesion produced on the upper air passages is perforation of the septum of the nose varying in extent from a circular hole ⅛ to 1 inch in diameter Perforation may be complete in a month from the time of commencement of work The anterior and lower margin of the cartilage and the bones to which they are attached never become involved in the ulcerative process so that deformity is absent, thus distinguishing the condition easily from that due to syphilis Once the perforation is complete no further inconvenience is felt not a few of the workers are ignorant of the existence of the condition

The phase of the subject dealing with the effects of chromium has been summarized by Bamberger[3] and, more recently, by Mitchell[4] Chrome workers are *subject, in addition* to the nasal lesions, to peculiar ulcerations of the skin called chrome holes Mitchell says

> It is generally recognized that neither in the form of dust nor in solution does the salt attack the unbroken skin For the production of a chrome hole, it is essential that the skin be previously abraded or injured in some way, however slightly Given such a surface, irritation is set up by the salt, and a papule or vesicle is formed, followed by a pustule The resulting ulcer is very characteristic It is most fitly described as a sluggish ulcer Its edges are clean cut, markedly indurated, thickened and undermined, and present a punched out appearance Its center is filled with a scab resting on a slough When the latter is removed, the floor presents a gray, indolent appearance They are from ⅛ to ¼ inch in diameter, occurring on parts exposed to injury But the most characteristic lesion associated with the manufacture of bichromate is that found in the septum of the nose, viz, perforation From this few chrome workers escape It is always produced by the action of the dust

According to Bamberger, chrome salts—referring particularly to potassium and sodium bichromate—exert a markedly irritating influence on the nasal mucous membrane There arises in the nose a marked prickling which causes violent sneezing, then, on the septum, there appears a small ulcer which is followed, painlessly, by perforation The hole enlarges until the entire cartilaginous septum is destroyed, when the process may heal without involvement of other regions

Mitchell describes the same stages preceding the perforation as are found in the production of chrome holes, namely, papular or vesicular, pustular and ulcerative Exposure of the cartilage by the ulceration destroys its blood supply, and therefore necrosis and perforation follow quite rapidly Six months' employment in a chrome works is liable to lead to perforation of the nasal septum in the bulk of those employed

The effects of the perforation are negligible The ulceration ceases when the limits of the cartilaginous septum have been reached and the edges heal over Bamberger says that elderly persons and snuff takers are less liable to perforation of the septum than are the young and those who do not use snuff. Mitchell concludes:

---

[10] A more detailed report, with abstracts of cases and observations on the phenolsulphonephthalein output, will be published elsewhere

[1] In a recent communication, one of the patients writes 'It might add a little interest to say that the use of a rubber respirator was early discontinued on account of the accumulation of condensed moisture in the valve, rendering it inoperative, and the fact that the moisture on the face then reacted with the dust which entered through the valve and caused much irritation Lamb's wool held in place by a flannel mask fitted to a canvas hood seems to be the most effective guard and at the same time the least objectionable to wear The moisture does not condense on the face for a long time, and it is light to wear Much of the dust is kept down by the use of oil, and all mixing is done in a ball mill'

[2] Kober, G M, and Hanson, W C Diseases of Occupation and Vocational Hygiene, Philadelphia, P Blakiston's Son & Co, 1916 p 5

[3] Bamberger München med Wchnschr, 1902, 49, 2144

[4] Mitchell Jour State Med, 1916, 24, 18

> It remains to be said that nothing that has yet been done has served to diminish the frequency of perforation of the septum. The inconvenience caused by the lesion does not seem to be sufficient to induce men to make trial of such expedients as plugs of cotton wool in their nostrils or, as has been proposed, painting the septum with paraffin. In short, preventive measures resolve themselves into the suppression or removal of dust and fumes, attention to cuts and abrasions, periodic medical supervision and cleanliness.

The lesion in the nasal septum of chrome workers appears to be quite analogous in its development and course to that produced by arsenic trioxid in the two cases described in this report. We have yet to explain the apparently characteristic location of the perforations, that is, in the cartilaginous septum. If the observation that, in chrome workers, cutaneous lesions develop only at the site of previous injury is correct, we may find the explanation for this apparently specific localization in the experience of Rothstein,[5] who relates that he has frequently observed perforations of the cartilaginous septum in tabetics, and that these perforations are always at a part which is easily reached by the finger nail. Rothstein is of the opinion that such perforations frequently follow injury to the mucous membrane due to the habit of picking the nose. With destruction of the mucous membrane there follows necrosis of the underlying cartilage, and perforation. If we apply the foregoing to the bichromate cases and to our arsenic cases we may construct the following hypothesis as to the probable course of events. Inhalation of the dust irritates the nasal mucosa. This leads the patient to pick the nose, in doing so he produces abrasions on the parts most easily reached and these abrasions furnish suitable sites for the bichromate or arsenic trioxid to exert their caustic action.

These cases have been reported not only because of their interest clinically but also because it is believed that physicians should be kept alive to the additional health hazards incident to the recent widespread development of the chemical industries in the United States.

122 South Michigan Avenue.

COMPRESSED OXYGEN FOR MEDICAL PURPOSES

Tilden Adamson, New York
Director Bureau of Contract Supervision Board of Estimate and Apportionment, City of New York

On a study of the supplies purchased by the city of New York one is confronted from time to time by the different prices paid for the same or similar articles. This experience is more or less common to all attempts at the standardization of supplies and purchases.

Sometimes a large industrial demand for a product of high purity makes that product available to the medical profession at a much lower cost than has heretofore prevailed. This does not necessarily reduce the cost to the profession if that particular product is purchased through the usual channels of medical supply.

A case in point is that of compressed oxygen for medicinal purposes. The extensive use of the oxyacetylene flame for welding has created a demand for oxygen of high purity. This demand has been filled by oxygen which is either distilled from liquid air or prepared by the electrolysis of aqueous solutions. The gas manufactured by either of these methods contains at least 98 per cent oxygen. The requirements as to purity for this gas are higher than those of the U. S. Pharmacopeia IX, "not less than 95 per cent." is the Pharmacopeial standard. The chief impurity in technical oxygen is nitrogen to the extent of 2 per cent. in oxygen from liquid air or hydrogen to the extent of 1.5 per cent. in electrolytic oxygen. Both nitrogen and hydrogen are inert gases and are harmless in these quantities as far as the animal organism is concerned. Technical oxygen of high purity is compressed to 1,800 pounds pressure per square inch in steel cylinders which deliver from 100 to 200 cubic feet of gas at room temperature and atmospheric pressure. The electrolytic gas sells at the uniform rate of $1.50 per hundred cubic feet and the oxygen from liquid air at the rate of $1.75 per hundred cubic feet.

In the year 1911 the city of New York paid varying rates from $1.53 to $45 per hundred cubic feet of oxygen for medicinal purposes. At present $5 for 75 gallons is not an unusual retail price, which is equivalent to $50 per hundred cubic feet.

There are two types of containers for medicinal oxygen in general use. For use in the wards, a cylinder from 30 to 36 inches in height and 8 inches in diameter is used. The charging pressure is from 200 to 225 pounds per square inch and such cylinders will deliver from 75 to 100 gallons or 10 to 12.2 cubic feet, of oxygen at 70 F. and at atmospheric pressure. The city of New York is paying at present $7.50 per hundred cubic feet for oxygen delivered in city owned cylinders of the type just described.

The second type of cylinder is 22 inches in height and 4 inches in diameter, and is conveniently portable. These small cylinders are used in the so-called "pulmotor" apparatus and in rescue and safety helmets. The charging pressure is from 1,500 to 1,800 pounds per square inch, and they deliver from 8 to 12.2 cubic feet of gas at 70 F. and atmospheric pressure. The city of New York is paying $11.25 per hundred cubic feet for oxygen delivered in this type of container, the containers being owned by the city.

It is obvious that considerable saving should be effected by installing suitable apparatus for charging and recharging both types of cylinders in institutions in which oxygen is used in large quantities for medicinal purposes. A small pressure pump, pressure gages and a water level gasometer constitute the necessary equipment for charging the low pressure cylinders from a large high pressure cylinder. In order to charge the small high pressure cylinders from a large one, a special pump costing approximately $210 is necessary. In factories in which oxygen rescue apparatus is in common use, the charging of small high pressure cylinders is done on the spot. There is no reason why the same practice should not be followed in hospitals or other institutions in which the demand is sufficiently large. This would bring the cost of oxygen for medical use down to the uniform price of from $1.50 to $1.75 per hundred cubic feet, exclusive of the time and labor involved.

In order to avoid accidents it is obvious that experience with gases under high pressure and practice with the apparatus should be acquired before attempting to recharge either type of cylinder.

If it is necessary to purchase cylinders, the large low pressure type should be manufactured and tested in conformance with the Interstate Commerce Commission's Specification No. 7, and the small high pressure type should conform to Interstate Commerce Commission Specification No. 3 or No. 3 A.

Following is our tentative specification for compressed oxygen.

THE CITY OF NEW YORK SPECIFICATION FOR COMPRESSED OXYGEN

Quality.—Compressed oxygen shall contain at least 98 per cent. of oxygen by volume. It shall give no coloration when 2 liters are bubbled through a solution of potassium iodid and starch at the rate of 4 liters of gas per hour.

Number of Tests.—On quantities of 1,000 cubic feet and more, one cylinder shall be selected at random and the contents of this cylinder tested.

Tests Waived.—On quantities less than 1,000 cubic feet, the chemical tests may be waived.

Methods of Test.—All chemical and physical tests shall be made in accordance with the Board of Estimate's standard methods of test.

Delivery.—It shall be delivered in steel cylinders which shall have been manufactured and tested in accordance with the regulation of the Interstate Commerce Commission and the date of the last test shall be plainly legible. The capacity of the containers shall be certified by a recognized testing laboratory, and the certificates shall be subject to inspection on request.

---

[5] Rothstein, T. C.: Personal communication to the author.

Payment—Payment shall be made for the number of cubic feet of gas at 70 F and 760 mm pressure accepted, at the price bid per cubic foot The pressure of each cylinder shall be tested immediately on delivery and shall register at least 1,800 pounds per square inch Cylinders registering less than 1,800 pounds at the time of delivery shall be rejected

EXPLANATION

NOTE 1—It is recommended that this specification apply to oxygen for medicinal use The chemist-in-charge at the General Drug Laboratory shall transfer as occasion demands oxygen purchased under this specification to cylinders suitable for medical use

NOTE 2—When oxygen is to be used in laboratories for determinations of heat of combustion or for organic analysis, the following additional requirement shall be made under "Quality"

The gas shall contain no hydrogen or other combustible matter

A CASE OF MERCURIC CHLORID POISONING, WITH SPECIAL REFERENCE TO THE LAMBERT TREATMENT

GEORGE E BROWN, M D, MILES CITY, MONT AND L W BASKETT, M D, BIG TIMBER MONT

This case is reported, not because of its rarity, but to show the effects of treatment in an apparently hopeless case, and to demonstrate the efficacy of this treatment on the kidney function, which was studied by means of the phenolsulphonephthalein test and specific gravity curve

The treatment described by Lambert and Patterson[1] was so successful that it seems the method of choice They emphasize (1) the need of prolonged gastric lavage, since shown essential by the work of Lieb and Goodwin,[2] (2) colonic irrigations, (3) diuretics, in the form of a mixture of potassium bitartrate, sugar and lactose, (4) potassium acetate by proctoclysis, and (5) daily hot packs

This elimination treatment is controlled by frequent examinations of the stomach and rectal washings for mercury Vogel and Lee's,[3] test for detection of mercury in the excretions is recommended

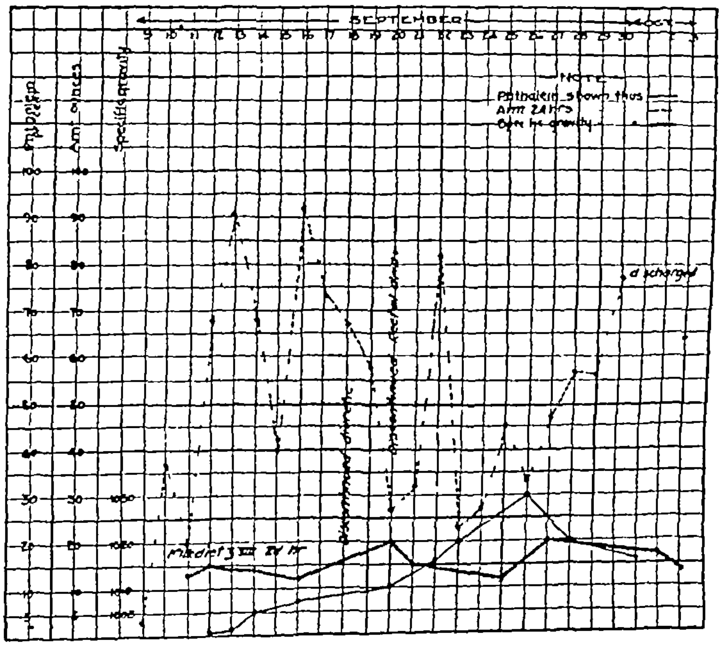


Chart showing effect of treatment of kidney function

REPORT OF CASE

History—F I, woman aged 33, married, first seen by one of us (L W B) 8 miles out of town, with negative family history, had never been strong She had had five children in eight years, the youngest of whom was 10 months old The patient finished menstruating, Aug 31, 1916, and, following her usual custom, inserted an astringent tablet in the vagina This tablet proved to be a 7½ grain mercuric chlorid tablet, and though she felt uncomfortable, she allowed it to remain One hour later she felt faint, and became ill with nausea and vomiting In about one hour vaginal pain became pronounced and diarrhea commenced The patient was ill all night and was seen by Dr Baskett at 10 o'clock the following morning The vagina and the stomach were washed out a number of times The patient continued ill for five days, with profound nausea and vomiting The bowels moved from six to twelve times daily with bloody passages She was seen by Dr Baskett on the sixth day, and was brought on a stretcher to Miles City in a very critical condition Close questioning of the patient revealed the fact that she had excreted practically no urine for two days—a few drops at the most

Examination—The patient was thin and pale The pulse was 60, and of low tension The temperature was 98 The patient was weak, she could scarcely talk or swallow on account of severe stomatitis, with bleeding at the slightest touch, this ulceration extended into the pharynx The blood pressure was 100, systolic. The red blood cells numbered 4,160,000, the hemoglobin on the Tallqvist scale was 70 per cent The Wassermann test was negative The twenty-four hour urine, September 8, 3 ounces, albumin ½ volume, sugar, a trace, pus and blood were present in sediment The lungs and heart were negative, the abdomen slightly distended There was no edema of the extremities On the vaginal mucosa was one large black eschar There were ulcerative lesions of the tongue, gums and pharynx

Treatment and Results—The patient remained under treatment twenty-one days, and after treatment was instituted, her improvement was gradual and constant At first she was sluggish and lethargic, but this condition improved as urinary excretion was established

Gastric lavage was given three times a day with large amounts of warm water One dram of potassium acetate in 1 pint of warm water was given by proctoclysis by the continuous drop method Every second hour, 8 ounces of the following diuretic mixture were given potassium bitartrate, 1 dram, sugar, 1 dram, lactose, ½ ounce, lemon juice, 1 ounce, water, 16 ounces Eight ounces of milk were administered every alternate second hour

Hot packs were applied twice daily The colon was washed twice daily with warm water This was continued until the stomach washings and the urine revealed no trace of mercury

The diuretic mixture was discontinued the ninth day and the proctoclysis the eleventh day after treatment had been begun The diet was increased on the fourth day to include cereals The vagina was packed daily with moist boric acid packing

Daily urine examinations revealed albumin varying from a trace to 1/10 volume Sugar was continually present in small amounts Pus and blood were present in sediment in varying amounts The stomatitis cleared up slowly under antiseptic mouth washes, but the patient still had taste impairment on the day of discharge

The effect of treatment is shown strikingly in the curves presented The specific gravity curve reveals a low specific gravity during the most severe stage of the nephritis, agreeing with Mosenthal, who has shown that there is a marked fixation of the specific gravity at a low level only during the most severe type of nephritis This also agrees with the studies of Lewis and Rivers The low specific gravity is maintained in spite of the wide variations of the twenty-four hour quantity The specific gravity three months later was 1 012

The phenolsulphonephthalein curve shows the beneficial effect of treatment The restoration of this phase of kidney function was gradual and constant Three months later, a normal dye excretion was present, though at this time an increase in blood urea was found, 0.36 gm per liter The most noticeable effect of this treatment, however, is shown in the rapid increased flow of urine Within thirty-six hours from the beginning of treatment the urinary flow had increased from 2 to 3 ounces, in twenty-four hours to 36 ounces in an equal space of time, and by the fourth day had reached 63 ounces in twenty-four hours

---

[1] Lambert, S W, and Patterson, H S Poisoning by Mercuric Chlorid and Its Treatment, Arch Int Med, November, 1915, p 865

[2] Lieb, C C, and Goodwin, G M The Excretion of Mercury by the Gastric Mucous Membrane, THE JOURNAL A M A, June 19, 1915, p 2041

[3] Vogel, K M, and Lee, O I Detection of Mercury in the Excretions, THE JOURNAL A M A, Feb 14, 1914, p 532

The patient was discharged, Sept. 30, 1916, having been under treatment twenty-four days Examination of renal function on this date revealed phenolsulphonephthalein excretion in two hours, 20 per cent , specific gravity, 1 016, albumin, faint trace, sugar, negative, sediment, few pus cells, many hyaline casts The patient was quite weak however, and she was referred to Dr Baskett for further care Her improvement was slow but constant

Dec. 4, 1916 examination revealed phenolsulphonephthalein excretion in two hours, 60 per cent , specific gravity of urine, 1 012, albumin faint trace, sugar, negative, sediment, no casts, few red blood cells, few pus cells, blood urea, 0.36 gm per liter

CONCLUSIONS

1 This case illustrates the importance of treatment in this type of poisoning more particularly the efficacy of the eliminative treatment as outlined by Lambert and Patterson

2 No case of this kind should be considered hopeless, and vigorous and accurate treatment should be started at once

3 These are hospital cases, and the Lambert and Patterson treatment cannot be carried out with the best results unless the patients are in a hospital

4 The importance of gastric and colonic lavage, as shown by Lambert and Patterson should be emphasized This treatment should be continued until no mercury can be detected in the excretion fluids

Therapeutics

DISTURBANCES OF THE KIDNEYS

(Continued from page 1551)

CATHETERIZATION OF THE URETERS

If pus or blood in the urine is not positively known to come from the urethra, the source of either one or both must be ascertained, and the diagnosis of the cause will determine the treatment

As it is not proposed in this discussion of kidney disturbances to describe diseased conditions of the urethra, bladder or the genital adnexa, urethral, bladder, prostate and seminal vesicle tests will be only briefly mentioned The two and three glass office tests in gonorrhea should be routine Young's seven glass test, well described by Thomas,[120] should be done from time to time in male cases to determine the source of the pus and what parts of the genito-urinary system are involved If the case is not one of gonorrhea, then these tests should be carried out immediately as a prelude to more accurate physical examinations It may also be stated that an organism, apparently a gonococcus under the microscope, does not positively prove that gonorrhea is present unless gonococci can be shown in cultures and unless the so-called complement-fixation test is positive It should also be noted that the complement-fixation test does not appear until the posterior urethra is infected in the male and the cervix in the female, and then not until the disease has been present four or more weeks If the test is negative, it does not prove that gonorrhea is not present The fixation test may be positive weeks after an apparent cure, proving that gonococci probably are present somewhere in the organism

Whether gonococci have migrated to a joint, a kidney, or to some other region, a gonococcic vaccine injection may give a focal reaction of value in diagnosis As a cure it is not a great success in acute gonorrhea or in its complications, but it may be of assistance in secondary subacute cases An autogenous vaccine may be of supplemental value to other treatments

Microscopic examination of secretion from a massaged prostate, culture examinations of sediment of the excretion (pus, blood, mucus and semen) obtained by an injection into a guinea-pig if tuberculosis is suspected, urethroscopy, cystoscopy, the passage of catheters into each ureter if necessary, roentgenography, pyelography, the tuberculin diagnostic test, and the Wassermann reaction should reveal the origin of pus or blood, or both, in the urine

It is now possible to shorten the period (about six weeks) of the guinea-pig test of secretion or excretion suspected of being tuberculous Murphy and Ellis[121] have shown that when white mice are exposed to Roentgen rays they are more susceptible to bovine tuberculosis than the normal animal, and Morton[122] of the Massachusetts General Hospital has shown that the resistance of guinea-pigs to tuberculosis is reduced by Roentgen-ray exposures Therefore the diagnosis of suspected renal tuberculosis can be ascertained in from eight to ten days by the inoculation of a guinea-pig exposed to Roentgen rays The application of the Roentgen ray to the guinea-pig for this object may be made in one large dose administered just before or shortly after the animal is inoculated

The ureters rarely show primary disease, but acquire disease or disability from above (the kidneys), less frequently from below (the bladder), or occasionally from some disease or condition external to them

It is hardly necessary to express the caution that before the passing of ureteral catheters the bladder should be thoroughly washed, lest infection be carried into the healthy ureter and to a healthy kidney When the bladder is seriously infected, a ureteral catheter should perhaps not be passed at all unless urgently necessary

As stated in the discussion on bleeding from the kidney, the term "essential hematuria" should not be applied unless all other causes have been eliminated, and even then surgery may find a tangible pathologic excuse for such bleeding A previous lesion, followed by a cicatrix, and the formation of varicosities and consequent bleeding are tangible causes of so-called essential hematuria, and cases have recently been described by Payne and MacNider,[123] showing that some such cause may be at the base of many if not of all so-called essential hematurias Of course there may be hemophilic bleeding from any portion of the genito-urinary tract without previous local disease

PYELOGRAPHY

While in many cases the usefulness of this method of obtaining roentgenograms cannot be disputed, it should be emphasized that only by the exercise of great care is the method free from danger It seems essential for safety that the opaque substance, colloidal silver or whatever it may be, should run into the pelvis of the kidney by gravity only and not by any syringe pressure If pain occurs, the instilled substance has apparently caused sufficient distention of the pelvis to force the solution into the terminal kidney tubules

---

[120] Thomas Am Jour Med Sc November 1913 p 696

[121] Murphy and Ellis Jour Exper Med 1914 **20**, 397

[122] Morton Jour Exper Med 1916 **24** 419

[123] Payne R L and MacNider W B The Surgical Problem of Unilateral Symptomless Hematuria The Journal A M A Sept 23 1916 p 918

Therefore this ultimatum of scientific roentgenography should not be resorted to unless other simple means of diagnosis have failed If the renal excretion is shown by various tests to be decidedly insufficient, and if the patient is in a weakened physical condition, pyelography should not be attempted

The objects of pyelography are to locate a kidney as to its relation to some tumor, to determine positively the amount of mobility of a kidney (roentgenograms being taken with the patient standing and lying), to accentuate a doubtful roentgenogram of a renal calculus, and to determine accurately the dilatation of a kidney pelvis in hydronephrosis and in pyonephrosis

While the normal capacity of the pelvis of a kidney is not entirely agreed on by surgeons who specialize in diseases of the kidney, testimony seems to show that any capacity below 30 c c. (an ounce) may be normal, any capacity above this amount is generally abnormal, and some patients complain of pain after the instillation of 15 c c (half an ounce) of liquid Overdistention of a kidney, whatever the size of the pelvis, and rapid distention will cause pain and may cause shock A rise of temperature is not infrequent after pyelography Childs and Spitzer[124] state that it should also be recognized that considerable twisting of the ureter may not be abnormal

An efficient technic of pyelography can be acquired only by association with some expert in this line of work It is obvious that the technic can be carried out only in a hospital with proper Roentgen ray equipment The patient who is to undergo the examination should be physically and renally able to endure it He should rest for two days before the operation — for it is an operation During these two days his diet should be rather light, and sufficient purging should be caused to obtain the best picture results Several opaque silver preparations are used in pyelography It is not clear that any one is preeminently the best Collargol has been, perhaps, the most frequently used, but thorium nitrate in 20 per cent solution has more recently been advocated[125] Whatever solution is used, it should be entirely evacuated in twenty-four hours In some cases the silver solution has been found retained in some part of the kidney structure

(To be continued)

---

[124] Childs, S B, and Spitzer, W M Roentgenographic Study of the Normal Kidney, Its Pelvis and Ureter, The Journal A M A, Sept 20, 1913, p 925

[125] Burns, J E Thorium—A New Agent for Pyelography, The Journal A. M A, June 26, 1915, p 2126 Further Observations on the Use of Thorium in Pyelography, ibid, Feb 17, 1917, p 533 Braasch and Mann Am Jour Med Sc, September, 1916, p 336

Inauguration of First Aid Service—Under John Moore (1826-1907), surgeon-general during 1886-1890, instruction in first aid was inaugurated in the service in 1886 This was one of the most important steps for the welfare of troops, in connection with which the first aid books of Dietz, Smart and Pilcher were published and the Hospital Corps of the United States Army was organized by Act of Congress in 1887, resulting in the drill manuals of Pilcher, Heizmann, Hoff, Havard, Woodhull and Dietz —Lieut-Col C C McCulloch, Jr, U S Army The Scientific and Administrative Achievement of the Medical Corps of the United States Army, *The Scientific Monthly*

Special Article

THE MEDICAL OFFICER OF THE ARMY

VII

ADMINISTRATIVE CONTROL IN TIME OF WAR

In time of war, the activities of the military establishment embrace the service of the interior and the service of the theater of operations The service of the interior is directly under the secretary of war and the bureau chiefs In this area, from the medical standpoint, several important functions are included The general hospitals are situated in this section They are directly under the surgeon-general, and their medical administration is handled by his office These general hospitals are similar to civil hospitals, in that they use buildings, giving them a permanent status, and the character of the cases treated is similar to those encountered in civil life Here are chronic diseases, permanent or semipermanent crippling from wounds, and all cases which will require long treatment for the recovery of the patients If a large number of these hospitals are required, undoubtedly many civil institutions will be used for the purpose

The physical examination of recruits of all kinds is carried out in this area This particular work, as may be imagined, will be extensive when the new conscript army is brought into being The medical service of the concentration camps, and the organization and training of new ambulance and field hospital companies will take place in this territory, and the administration will be directly under the War Department at Washington

THEATER OF OPERATIONS

The service of the theater of operations comprises all that territory covered by the actual movement of the troops in the field This service is directly and entirely controlled by the commander of the armies in the field, and his chief surgeon has direct administrative control over the sanitary troops in this army

SUPPLY AND OTHER TRAINS

The most important administrative departments for the army in the field are those which are concerned with the supply of this army With the division are the following supply trains the combat train, field trains, ammunition trains, sanitary trains, supply trains and engineer trains

The combat train consists of a certain number of wagons attached to each regiment which follow directly after this regiment on the march They carry only ammunition, entrenching tools and reserve medical supplies When an engagement is imminent, this ammunition and the other supplies are issued to the command, and the empty wagons go to the rear to be refilled The pack mule which is assigned to each regiment for the transportation of sanitary supplies is attached to this train

The field trains carry the baggage and rations of the regiment, on the march, however, they do not follow the regiment, but are back in the rear with the trains When camp is reached, these wagons return to the regiment so as to provide for the proper distribution of rations and other supplies

In the column of trains, the supply trains follow usually directly after the sanitary trains The latter have been treated in a previous article, so will not be considered here The supply trains carry extra forage and rations for the division so that a sufficient supply can be kept on hand at all times

The engineer trains carry the pontoon and pioneer equipment of the engineer corps The ammunition train, which always heads the column of trains, carries the reserve ammunition for the division

When on the march these trains are under command of an officer detailed as commander of trains, and he has complete control over them When their services are needed, or an engagement is imminent, the sanitary trains are immediately released from his command and placed directly under the division surgeon

When the field trains are emptied, they proceed to a point designated in orders called the refilling point, and there are refilled from the supply train, and in turn the supply train is sent back to the head of the line of communications, which is called the distributing point, to be supplied This method of handling these trains prevents the field trains from ever becoming greatly separated from their regiments

The medical supplies needed for the division are brought up on the supply trains in the same way that forage and rations are handled, and when brought to the refilling point are turned over to the sanitary units which carry the reserve sanitary supplies for the division

The source of these supplies is not always the base, but the country through which the army is advancing is required to furnish a certain amount of necessary supplies to the troops This is called supply by requisition This is of interest from a medical standpoint, in that all obtainable sanitary supplies are also requisitioned from this territory

LINE OF COMMUNICATIONS

The line of communications is, of course, under command of the commander of the line of communications, but the length of this territory is such that he cannot control it without proper assistance To provide for a more efficient administrative control, the area is divided into two sections the base section and the advance section Each of these sections is handled by an assistant chief of staff, who represents the commander of the line of communications in that section

The handling of sanitary supplies and the evacuation of the sick and wounded are in the hands of a medical officer assigned to each of these sections The official titles of these officers are surgeon of the advance section of the line of communications, and surgeon of the base section of the line of communications The surgeon of the base section of the line of communications is also the technical adviser on the staff of the commander of the line of communications Sanitary supplies are pushed forward, and the sick and wounded are evacuated to the rear directly under the control of these officers, and they are responsible for the efficient handling of this service Failure in performing their duties in a proper manner could not be tolerated for one moment The actual existence of the army depends on the efficient handling of the supply and sanitary service, and the general public never realizes how much depends on the work of these officers, working without hope of glory or reward

HOSPITAL TRAINS

The service of military railroads which handles hospital trains, though under the commander of the line of communications, is directly controlled by the director of military railroads, who is an engineer officer detailed for the purpose, and all movements of hospital trains are carried out under his immediate orders These trains run on regular schedules, and officers who may be placed in charge of such trains should remember that it is extremely important that the schedules laid down should be followed carefully and delays in entraining and detraining cannot be tolerated

MILITARY POLICE

Another department of the military service which is of interest to the medical officer is the military police This is composed of officers and soldiers detailed for the purpose, and has complete control of the territory immediately in the rear of the fighting line Its function, in addition to regular police work, is to gather in stragglers and take care of prisoners of war The medical department is interested in this service, for malingerers in the stream of wounded coming from the front, and all wounded prisoners of war, are ultimately turned over to the military police

THE GENEVA CONVENTION

In the back of the "Field Service Regulations" are a number of appendixes The one that concerns the medical officer is that which gives the text of the Geneva Convention

[Note—This concludes this series of articles They will be reprinted in pamphlet form slightly modified and extended The pamphlet will also include 'The Medical Corps of the Army as a Career," by Major Robert E Noble, Instructions to Officers of the Medical Reserve Corps concerning procedure when called to active duty, and the text of the Geneva Convention]

New and Nonofficial Remedies

The following additional article has been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies A copy of the rules on which the Council bases its action will be sent on application W A Puckner, Secretary

KEPHALIN-ARMOUR—The hemostatic phosphatid obtained from spinal cord and brain tissue It is essentially the same as Brain Lipoid (New and Nonofficial Remedies, 1917 p 125)

Action and Uses—See New and Nonofficial Remedies, 1917, p 124 under Fibrin Ferments and Thromboplastic Substances (Kephalin) "

Dosage—0 1 to 0.2 per cent suspensions of kephalin-Armour in sterile physiologic sodium chloride solution is applied freely to bleeding or oozing surfaces

Manufactured by Armour and Company Chicago—No U S patent or trademark

The brain and spinal cord of mammals is desiccated in vacuo and the crude phosphatids extracted by means of petroleum ether This liquid is concentrated and then precipitated with an excess of acetone The precipitate is extracted with acetone and then with alcohol The residue is dried and dissolved in ether and the ether solution evaporated to dryness at a low temperature

Kephalin Armour is an amorphous, yellowish substance of characteristic odor and taste. It is readily soluble in ether and chloroform slightly soluble in alcohol and insoluble in acetone In neutral aqueous solution it forms an opalescent emulsion The blood clotting properties of kephalin Armour are not destroyed by boiling aqueous suspensions of it.

One part kephalin Armour will coagulate 1000 parts oxalated blood plasma in from one to two minutes when tested as follows 1 Cc of a 5 per cent solution of kephalin Armour in ether is added to 25 Cc of physiological sodium chloride solution and the mixture shaken until a uniform suspension results 5 Cc of this suspension is mixed in a large test tube with an equal volume of blood serum Ten Cc of oxalated blood plasma (1 Gm sodium oxalate in 100 Cc. water added to 900 Cc. fresh blood) are then added and mixed by inverting the test tube twice The mixture is rapidly transferred to a shallow porcelain dish it should curdle in from one to two minutes All solutions used in the preceding test should be made freshly and the temperature of the liquids and the porcelain dish should be maintained at 38 C

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street . Chicago, Ill.

Cable Address . "Medic, Chicago"

Subscription price . . . . Five dollars per annum in advance

Contributors, subscribers and readers will find important information on the second advertising page following the reading matter

SATURDAY, JUNE 2, 1917

THE DUTY OF THE MEDICAL PROFESSION IN THIS WAR

This is the most destructive war the world has ever experienced. Indeed, it is more than a war. It is a cataclysm in the progress of civilization. In its effects on man it is comparable to the great geologic epochs which have endangered the existence of the race and profoundly modified the development of civilization. Whatever may be the results of this titanic struggle, the trend of man's evolution must be profoundly altered. Ultimately, it may result in benefit to the race, or it may lead to deterioration. Our success, with that of our allies, is essential to the welfare of the world. Defeat would mean not only disaster to ourselves, but the retrogression of all nations. We are fighting to protect our nation against a ruthless aggressor, to aid England, France and Italy, whose ideals are in harmony with our own and who up to the present have been fighting our battles, to restore desolated and ravished Belgium and Serbia, to assist Russia in her struggle for liberty, and to give freedom to the great masses of the German people themselves. The cry for help that comes to us from our allies should cause us to respond with our greatest effort, directed by our highest intelligence, and stimulated by our most unselfish desires.

* * *

In this great struggle the medical profession has a part to play second to that of no other group of men. The medical profession has had its peculiar duties and obligations in all wars, but especially in this war. The medical service is the branch of the army whose functions are concerned almost solely with the amelioration of the horrors of war. Our European confreres have shown themselves worthy by their ready enlistments, by their high skill and intelligence and by their altruistic devotion. The high rate of medical corps fatalities testifies to this. Practically every physician in France is in the army, either with the combatants or on detail to take care of civilians, but in either case he is absolutely at the command of the military authorities. There are today practically no private practitioners in France. Every medical man is subject to order, and is working not in his own interest, but in the service of the state. In England the profession has been so reduced that at present there is only one practitioner for every 4,000 population in densely peopled districts, and one to 2,500 in the more sparsely occupied areas, and even these are now subject to call.[4] There the organized profession itself has sole charge of supplying the army with medical officers. This has been, and is still, being done without the necessity of a draft among physicians, except the draft which is exercised by the profession itself. Let there be no slackers among us!

* * *

Let there be no slackers! But, also, let there be none to offer themselves, provisionally, asking that they be favored in this, that or the other way. In promoting to higher ranks, the Surgeon General undoubtedly will avail himself of the best information concerning each man's fitness, and in assignment to duty the same care will be exercised. An internist will not be assigned to operative work, nor will a sanitarian be expected to take the place of an ophthalmologist. Individual preference and special fitness, we may rest assured, will receive full consideration in all cases. But it must be remembered that the exigencies of the situation may demand, at times, that the medical officer sacrifice his personal and professional pride and do a service which he may consider a drudgery. This sacrifice he should be willing to make for his profession's honor and for his country's good.

* * *

A few prominent men have expressed great disinclination to be assigned to the physical examination of recruits. Yet no more important function falls to the lot of the medical officer than this work. Every physically unfit man in the enlisted ranks is not only a dead weight to be carried for the present, but also a potential burden on the pension lists to be borne in the future. So far as possible, the final examination of enlisted men in the concentration camps will be made not by individual medical officers, but by boards of experts. On these boards there should be men skilled in the recognition of surgical, circulatory, genito-urinary, dermatologic, pulmonary, neurologic, ophthalmologic and otologic defects. If an army of 1,000,000 men is to be assembled, two or three times this number may need to be examined. These examinations must be carefully, scientifically and conscientiously made. No greater honor and no greater responsibility can come to a medical man, eminent in any of the specialties, than to be placed on such a board. No such opportunity—rich in material from among our diversified population, important to the success of our cause, valuable from a scientific point of view, worthy of the high skill of the specialist—is likely to come again to the medical profession

---

[4] Draft of Physicians in England, The Journal A. M. A., May 19, 1917, p. 1483. Compulsory Mobilization of the English Medical Profession, p. 1486.

* * *

The war in Europe has wrought great havoc, it has destroyed millions of lives, has maimed and crippled many men, has littered the fields with shells of destruction, dismantled cities, and crumbled into dust some of the most stately edifices, both secular and religious, ever conceived in the brain of man or reared by his hands Civilization is not to be lost, and the upward progress of the race is not to be permanently arrested The potent saving factor in this great catastrophe is scientific medicine Had disease followed these great armies in like proportion as it accompanied smaller armies in the past, the better part of civilization might have been lost But in all the belligerent countries medical science has stayed the pestilence and coped successfully with typhoid, typhus, plague, cholera and other infections which in the past often wrought greater havoc than war and determined the fate of nations The obligation has come to us Let us lay aside our individual interests, forget our personal desires and professional ambitions, and with one accord proceed in the execution of the duty that lies before us

LIMITATIONS OF THE WHITE BEAN AS A DIETARY COMPONENT

Although legumes of various sorts have been familiar food products from early times, they have never formed the prominent staple of the dietary of large groups of people in the same sense that wheat or rice or other cereals have long been the "backbone" and chief ingredient of the ration of great masses in different parts of the world At the present time, however, when all available sources of nutriment are being carefully taken into account and when the item of comparative cost is directing attention to every possibility in the way of food sources, the relatively low priced legumes, such as beans, are receiving serious consideration as an efficient supply of valuable nutrients

The legumes, as peas, beans and lentils, are characterized by being decidedly richer in protein than are other vegetables Moreover, they are easily preserved dry, a state in which they are of apparently greater fuel value than meats, judging by proximate analysis alone Legumes in the green state are generally regarded as more readily digestible than the dried products Although dried beans, for example, bear the reputation of being undesirable as a prominent component of the daily diet, such impressions receive scant consideration in times of stress from many of our food dictators

Actual digestion trials on man are not wanting in the case of beans When beans have formed about one quarter of the ration, the utilization of the protein has been estimated in American experiments at less than 80 per cent, a figure decidedly lower than that obtained for the proteins of meat, eggs or milk In Oshima's[1] compilation of Japanese investigations, an average digestibility of 65 per cent is reported for beans These legumes contain celluloses and hemicelluloses, carbohydrates which are entirely or for the most part indigestible To the interfering presence of these components the lowered digestibility of white beans has usually been ascribed Mendel and Fine,[2] who have made extensive studies in this field, have pointed out that the unfavorable results can be explained in part only on the basis just referred to Isolated bean protein, free from the supposedly interfering cellular detritus, does not appear to be satisfactorily utilized in the alimentary tract, and in feeding experiments by Osborne and Mendel[3] with purified phaseolin, the chief protein of the bean, the nutritive results were highly unsatisfactory when this product formed the sole source of the nitrogenous part of the diet

An important contribution to the problem of the biologic value of the white bean of commerce has just been made from the laboratory of agricultural chemistry at the University of Wisconsin by McCollum, Simmonds and Pitz[4] Experiments on rats, the best guide as to what may be expected in respect to the nutrient possibilities of a ration, have shown that caution is necessary in advising an extensive use of beans to supplant other protein rich foods in the diet The Wisconsin investigators remind us that the hasty substitution of legumes as a class for the apparently more expensive sources of protein, meat, milk and eggs, may be misleading Modern investigations of proteins by chemical and biologic methods have made it clear that from the dietetic standpoint the term "protein" cannot be loosely employed as it was formerly "Protein is of biologic value only in so far as it yields appropriate proportions of essential amino-acids"

Some of the facts bearing on the problem are illuminating When the protein of the ration was derived solely from beans there was a high mortality among animals thus fed, and pronounced stunting was observed in all Small supplements of acknowledged superior proteins like the casein of milk may bring some improvement, but a high content of beans in the diet appears to exert an injurious effect in any event McCollum, Simmonds and Pitz have provisionally adopted the view that their subjects were mechanically injured by the distention of the digestive tract, due to the extent of fermentation processes after eating liberally of beans. The latter contain much carbohydrate of the class of the hemicelluloses, for the digestion of which the higher animals have no provision. These hemicelluloses are, however, readily attacked by micro-organisms inhabiting the digestive tract, and their fermentative decomposition is accompanied by the liberation of a great deal of gas. That this is largely responsible for the injurious effects following high bean feeding is supported by the marked tympanites observed regularly in experimental animals eating rations high in beans. It is further suggested by the Wisconsin investigators that partial asphyxiation of the walls of the intestinal tract through interference with circulation caused by excessive stretching is the principal factor in debilitating the animals, but the low quality of the proteins is a contributing factor.

---

[1] Oshima K. Bull 159 U S Dept. Agric. Office Experiment Stations 1905

[2] Mendel, L. B and Fine M S Studies in Nutrition IV The Utilization of the Proteins of the Legumes Jour Biol Chem 1911 1912 **10**, 433

[3] Osborne T B and Mendel L. B Beobachtungen über Wachstum bei Fütterungsversuchen mit isolierten Nahrungsubstanzen Ztschr f physiol Chem, 1912 **80**, 307

[4] McCollum E. V Simmonds N and Pitz, W The Dietary Deficiencies of the White Bean Phaseolus Vulgaris Jour Biol. Chem 1917 **29**, 521

Another disadvantage of the white bean lies in its content of inorganic salts, which does not support growth. Additions are essential to make it suitable. These can be secured by the appropriate use of other foods, but in such matters expert advice is necessary when the ingredients of the diet are somewhat restricted as to variety. One advantageous feature of the white bean deserves special mention. It is rich in the as yet unidentified water-soluble vitamin that plays an important part in nutrition, although it is quite as deficient as are the cereal grains in the fat-soluble vitamin so prominent in butter fat and so useful in promoting growth.

It will be recalled that those who support the dietary theory of the origin of pellagra urge the inclusion of fresh animal foods and leguminous products in the diets intended to prevent the genesis or recurrence of the disease. Until more information is forthcoming, caution in the extensive use of white bean protein is advisable. Thoroughly cooked beans may act as a very desirable source of water-soluble vitamin despite their shortcomings on the protein side. Many natural foods contain this, however. We agree with McCollum and others that "the evidence at present available points to the conclusion that the bean proteins are decidedly inferior to those of meat, milk, eggs, and the cereal grains which have thus far been carefully studied, viz., wheat, maize, oat, and rice kernels." On the other hand, it would be an unjustified generalization to put all legumes in the same category and under the same ban as the white bean. Peas, peanuts, soy beans and other legumes deserve to be tested with equal care. The chief occasion for extreme caution lies in the possible dangers. Inclusion of undue amounts of beans in the rations of persons restricted to what is supplied to them, as in the case of armies, navies, prisons, asylums, etc., needs to be carefully considered by those who understand some of the facts which have just been rehearsed, and who have the confidence and courage to act in accordance with the lessons of science.

THE CLASSIFICATION OF STREPTOCOCCI

The important rôle that streptococci play in a large number of acute infectious processes has made the classification of the various strains of this group of micro-organisms a problem of great consequence from the standpoint of the clinician. An examination of the morphologic, cultural and biologic peculiarities of races of streptococci from different sources indicates that differences exist between certain strains, but it is difficult to determine the significance of these variations. In spite of exhaustive studies by a large number of investigators, little progress has yet been made toward the development of a practical basis for differentiation. It seems that instead of attempting to simplify and standardize the various proposed methods now in use, there has been a tendency to develop a great number of complicated technical classifications which may have confused rather than clarified the problem. Perhaps the most important contribution to our knowledge of the streptococcus group from the standpoint of the classification of the different strains was made in 1903 by Schottmuller, who introduced the blood agar plate method of culture. By the use of blood agar plates two distinct types of streptococci were differentiated on the basis of characteristic metabolic functions — hemolytic streptococci, which produce active hemolysis but no methemoglobin, and green-producing streptococci, which convert oxyhemoglobin to methemoglobin without causing appreciable hemolysis. Schottmuller called these types *Streptococcus longus pathogenes seu erysipelatos,* and *Streptococcus mitior seu viridans,* respectively. Subsequent investigators have confirmed and extended Schottmuller's work, and it has been observed that these two classes of streptococci usually give rise to different types of infections. The blood agar plate has become indispensable in the study of streptococcus infections, but the lack of standardization of this method still hampers its usefulness to some extent.

Another means of differentiation of streptococci that has gained sufficient prominence to become a routine procedure is based on the fermentation reactions of the different strains. Gordon, Hiss, Andrewes and Horder, and many others have attempted to classify streptococci on this basis, but the existence of numerous variable and anomalous strains, and the use of a diversity of methods have interfered with the establishment of definite types. Recently, however, Holman[1] and Blake[2] have suggested a combination of this procedure with the blood agar plate method, and their results are more encouraging. This is especially true of Blake's work, for his classification is more practical since he advocates besides blood agar the use of only two fermentable substances — lactose and mannite But standardized laboratory procedures for the differentiation of streptococci on the basis of fermentative reactions must be introduced generally before this method can be of help in the clinical study of pathologic conditions in man caused by streptococci

---

[1] Holman, W. L.: The Classification of Streptococci, Jour. Med. Research, 1917, 34, 377.

[2] Blake, F. G.: The Classification of Streptococci, Jour. Med. Research, 1916, 36, 99.

To be of clinical value, a method of differentiation of varieties of bacteria must yield concrete information as to the source of the organism, and the type of pathologic process with which it is associated On the other hand, such a method must not demand highly expert laboratory skill, a limitation of cultural tests as well as avoidance of complex classification are necessary At this time a standard blood agar plate method such as recommended by Becker,[3] Holman, Blake or others is the only approach to a method that in any way fulfils these requirements so far as streptococci are concerned As stated, the two types of streptococci thus differentiated have definite and characteristic metabolic functions Furthermore, they differ in pathogenic properties — the hemolytic type usually being parasitic and highly virulent, while the green-producing type is often saphrophytic or of relatively low virulence, at least when judged by the time required for certain infections to reach a fatal end Hence, the blood agar plate culture in streptococcus infections may yield valuable information There still remains the hope that a differentiation of streptococci on the basis of their immunity reactions, similar to that developed for pneumococci and other organisms, may be accomplished There is convincing evidence already at hand which indicates that the antigenic properties of the hemolytic and green-producing streptococci are quite different, a fact that should encourage intensive study along these lines In the study of the immunologic differences of races of streptococci, refinement in the preparation of antigens might be of great help

THE ORIGIN OF RED BLOOD CORPUSCLES

According to a current dictum in histology, the mammalian red blood corpuscle is a cell which has lost its nucleus At an early period in fetal life the blood-forming function appears to be associated with the fetal liver In the "blood islands" of this organ, nucleated erythroblasts are believed to be formed rapidly by karyokinesis The primitive spleen also assumes a small portion of the hematopoietic function, which, however, does not appear to persist in these organs much beyond the term of intra-uterine life

With the appearance of the red marrow of bone, the work of blood formation is transferred in increasing measure to it Here this activity seems to be continued throughout adult life, being much accelerated after hemorrhages and in certain pathologic conditions It is generally stated that in their primitive condition all red blood cells are nucleated — erythroblasts, of a biconvex rather than a biconcave shape Groups of such nucleated, colorless erythroblasts are found in the red marrow These cells, according to the textbooks, multiply by karyokinesis, and the daughter cells eventually produce hemoglobin in their cytoplasm, thus forming nucleated red corpuscles Subsequently, according to the present conception, the nuclei of these cells are lost and the newly formed non-nucleated red corpuscles are forced into the blood stream In fetal life, and in certain pathologic conditions in which blood formation is greatly accelerated, the process is said to occur with sufficient rapidity to permit the immature erythroblasts to gain entrance into the general circulation The red blood cells of the earliest fetal circulation are, therefore, all nucleated, those of later fetal life are nucleated in decreasing proportion, while in healthy extra-uterine life only mature non-nucleated forms ordinarily occur in the general blood stream

It remains to inquire how, on this hypothesis, the nuclei disappear from the cells as described Some regard the process of disappearance as an *extrusion*, others as a disintegration or solution In attempting to observe the different stages of the development of the normoblasts into a true red corpuscle by means of a living culture of red bone marrow, Tower and Herm[1] have been led to question the validity of the current descriptions Instead of witnessing a normoblast remodeled into a non-nucleated corpuscle by losing its nucleus, they saw this normoblast send out non-nucleated straw-colored bladders from its nucleus, these bladders finally separating off as true red corpuscles This process was not confined to the normoblast type, but was evident in the lymphocyte series of white cells Moreover, observations show that the normoblasts in the mammal (cat) and the red corpuscles in the bird (chick) arise from white cells by an intranuclear activity, and at the time when they first emerge from the parent cell they are almost indistinguishable from each other

The novelty in these studies may be thus summarized The mammalian red blood corpuscle is a nuclear bud which escapes into the circulation as the true red cell The mammalian normoblast and the red corpuscle of the bird are the product of intranuclear activity and are phylogenetically identical Phagocytosis of red cells by the giant cells (megakaryocytes) in normal blood-forming tissues is by no means common The true process is undoubtedly the manufacture and not the destruction of red cells When it is recalled that a continual disintegration of a certain proportion of red corpuscles in the blood stream is today postulated as an essential factor in the production of bile pigments, it follows as an inevitable consequence that new erythrocytes must also be forming continually The investigation of a process thus prominent is fundamental to any adequate conception of hematopoiesis That a new method of study has raised new problems in regard to the process under investigation is characteristic of progress in scientific research

---

[3] Becker W C The Necessity of a Standard Blood Agar Plate for the Determination of Hemolysis by Streptococci Jour Infect. Dis 1916 **19** 7 4

[1] Tower R. W and Herm C F The Intranuclear Origin of the Mammalian Red Blood Corpuscles Observed in Living Cultures Proc Soc. Exper Biol and Med 1916 **14**, 51

EPIDEMIC MENINGITIS

Epidemic meningitis is spread in the same way as diphtheria — by contact with the sick and with carriers, meningococcus carriers As pointed out a week ago, the meningococcus carrier is of far greater importance in spreading meningitis than sick patients In the case of diphtheria it is the rule everywhere that proper preventive measures are enforced to control diphtheria carriers until they are free from bacilli Similar measures should be enforced in the case of epidemic meningitis, not only in the case of troops or in camps, but also in civil communities

Meningitis is a *fearfully destructive disease, and no* step that tends to limit its spread should be omitted Wherever epidemic meningitis appears, the patient and carriers should be segregated immediately[1] In the treatment of epidemic meningitis the immediate intra*spinal injection* of specific meningitis serum is absolutely indispensable Such injections, preceded in each case by the withdrawal of the cerebrospinal exudate, should be continued daily, or practically daily, until the condition of the patient no longer requires specific treatment English observers (Foster and Gaskell) lay great stress on the value of frequent removal of the cerebrospinal exudate even when the serum is not injected, but whenever serum believed to be reliable is available, it is not doing the most we can in the situation to omit its intraspinal injection Unfortunately, as shown by experiments in England, some of the serum as obtained under market conditions seems to be without sufficient virtue to have any curative effect In this respect we still are at the mercy of the manufacturers, unless fortunate enough to be able to secure the serum from institutes for research, such as the Rockefeller Institute for Medical Research or the research laboratories of the board of health of New York City There has been, and is still, urgent need for efficient methods of standardization of antimeningococcus serum

*When re*cruiting on a large scale begins, it may be
advisable, in view of the wide spread of epidemic
meningitis at pthe present, to search for and segregate car-
riers among new The recruits, especially those coming from
districts where npossi meningitis is prevalent This work, if
done as it should gans be, will require specially trained men
In addition to the plied training given at the Army and
Navy Medical Scho asyl ols, the Rockefeller Institute has
arranged to give inte ose wh to nsive training to medical officers ment experienced
this work and off t been ake the work in
members of its rage arch have made
field Otl
lar offers

It cannot be too strongly emphasized that the bringing together of large bodies of men from various parts of the country involves the serious menace of the development of this disease The disease can be prevented, provided the right measures are adopted Such measures include a careful survey of the localities from which the men come, as to the prevalence in those localities of epidemic meningitis, a systematic search for *carriers, the retention of all car*riers until free from meningococci, early diagnosis and immediate isolation of patients with repeated intraspinal injections of serum, including withdrawal of the exudate[1]

Current Comment

THE BASE HOSPITAL UNIT

After war was declared the first call on this country by its allies was for medical officers We were prepared to, and did, respond, and we were able to do this *simply* and *solely* because we had the base hospitals *organized, equipped and ready to respond* In a word, because this new idea of preparedness had been carried out, we were prepared to respond to this emergency call, otherwise we should *not* have been The idea of forming these base hospitals was original in this country and has been carried out nowhere else In October, 1915, Dr George W Crile suggested and thoroughly *outlined the whole general scheme of* organization This received *the instant approval* of the American National Red Cross, *through Col Jeffer*son R Kean The idea was taken up with enthusiasm, and in many cities in which there were institutions that could further the proposition the foundation of these base hospitals was undertaken There were seven in the course of enrolment in May, 1916, with two others prospective By May, 1917 — one year later — there were available for use by the United States Army thirty-eight base hospital units practically equipped and ready with brief training for active duty At the present time four of these base hospitals are in England or France; two others are en route and possibly by the time this appears will have arrived in England, and four others are about to go As has been stated, the conception of an organization drawn from an existing civil hospital, whose personnel would embrace the best medical and surgical talent, is a new one It is this idea of a group of men already acquainted and working together in civil life being transported to the field of action — in this case to a foreign country — where they still work as a unit, that makes the scheme so valuable and practical It is the conception of a smoothly running machine picked up in all its perfection and transferred to a new location, where, almost by the simple turn of a switch, the entire machine is again in working order Two men especially deserve the credit — Dr Crile for suggesting the idea, and Colonel Kean of the American National Red Cross for carrying it out

---

[1] In connection with this matter see the remarks of Dr Flexner under 'Medical Mobilization and the War

ANAPHYLAXIS TO SERUM

The use of antitoxic or curative serums in the past has occasionally been attended with disagreeable anaphylactic symptoms — serum rashes, etc — which have been almost impossible to foretell and difficult to combat The refinement of antitoxic serums, recently introduced, has lessened the incidence of the undesired reactions, and thus has emphasized the probability that the manifestations of anaphylactic sensitization and the therapeutic properties are not necessarily associated with the same components of the serum Studies of the chemistry of serum have clearly indicated that the antitoxins are not a common property of all the blood proteins of immunized individuals, but either belong specifically to definite proteins or are associated in some way with special protein fractions It is the recognition of this fact which has made the concentration of antitoxin so successful[1] In attempting to free antitoxic serums from the dangers of various anaphylactic phenomena, it has naturally been asked whether the different proteins of the serum play a different part in the anaphylaxis to foreign serum Do all of them have an equivalent or even common antigenic function? Such questions of immunologic specificity are not new, they have been answered definitely in the case of certain proteins in a way to suggest that the antigenic distinction is possibly dependent on such properties of the different proteins as may be open to the ordinary methods of chemical and physical inquiry, rather than on some mysterious biologic relationship The work of Wells and Osborne[2] has contributed fundamentally to the establishment of such anaphylactic specificity on a chemical basis That every sensitization with whole serum is in reality a complex multisensitization has been indicated anew by recent observations conducted for the British Medical Research Committee by Dale and Hartley[3] These show that each of the three proteins separable from horse serum by their physical and chemical properties — euglobulin, pseudoglobulin, albumin — can act as an anaphylactic antigen Complete separations of such serum proteins is extremely impracticable, if not actually impossible at present On the whole, however, the evidence seems in favor of the view that the different proteins of a serum, so far as they can be obtained pure from one another, act as independent anaphylactic antigens A practical feature of this work may be alluded to here Dale and Hartley remark that since all the proteins of a serum can act as anaphylactic antigens, it is evident that the ideal to be aimed at, in concentrating the curative element in a specific immune serum, is simply the reduction of the ratio of total protein to antitoxic value, for the purpose of reducing serum reactions, the elimination of albumin seems to be as important as that of euglobulin, when the pseudoglobulin is the fraction carrying the therapeutic power

---

[1] The Refinement and Concentration of Diphtheria Antitoxic Serums editorial The Journal A M A Jan 6 1917 p 38

[2] Proteins and Anaphylaxis editorial The Journal A M A Jan 1 1916 p 36 Lake G C. Osborne T B and Wells H G Jour Infect Dis 1914 **14**, 364 Wells H G and Osborne T B Ibid p 377 1915 **17** 259 1916 **19** 183

[3] Dale H H and Hartley P Anaphylaxis to the Separated Proteins of Horse Serum Biochem Jour 1916 **10**, 408

THE EFFECT OF COLD ON MALARIAL PARASITES

Experiment has demonstrated that many microorganisms are far less sensitive to low temperatures than was believed to be probable in the earlier days of bacteriology, in view of the permanent damage or death which promptly ensues when the environmental temperature of these lowest forms of life is raised The detrimental effects of heat have not found a counterpart in the influence of cold Some bacterial species are known to survive temperatures far below those of the extreme cold occurring in nature The possibility of a survival of other lower forms, such as the plasmodia, under the adverse conditions represented by low temperature, has not in the past been equally well investigated King,[1] the government entomologist, has stated that the impression is gained from the literature on malaria that the development of malaria parasites in *Anopheles* is arrested at a temperature of about 60 F and that the parasites themselves are destroyed at temperatures below this He recognizes the importance of the question, since it involves the survival of infection in mosquitoes after hibernation or after exposure to low temperatures under natural conditions In new experiments conducted in the Tulane University Medical Department at New Orleans, King has found that the parasite of tertian malaria in the mosquito host is able to survive exposure to a temperature of 30 F for a period of two days, 31 F for four days, and a mean temperature of 46 F for seventeen days In a smaller series of tests the sporonts of the estivo-autumnal parasite have shown a resistance to temperatures as low as 35 F for twenty-four hours This demonstration of the resistance of *Plasmodium vivax* and *Plasmodium falciparum* to cold and survival through a freezing temperature of several days' duration is significant

DIFFERENTIATION IN THE PARATYPHOID-ENTERITIDIS GROUP OF BACTERIA

In the case of groups of similar bacteria, such as the members of the paratyphoid-enteritidis group, which cause serious epidemics in man and animals, it is important to determine whether each member is a fixed type, according to human or animal origin, or is constantly changing from one type to another On the practical side it is desirable to know whether paratyphoid is due to infection from human sources or to infection from the lower animals, as is apparently the case in infection with the enteritidis bacillus in "meat poisoning" epidemics Certain earlier workers held the members of this group to be indistinguishable, but recently Jordan[2] and Krumwiede[3] have found sufficiently typical cultural and agglutinative differences to justify a division into four groups The cultural differences consist in the formation or absence of formation of acid and gas in xylose, arabinose and dulcite, and in the degree of rapidity of alkali formation in litmus milk The paratyphoid A strains, which always are derived from human sources, according to Jordan, produce alkali in litmus milk much more slowly than the others, and do not ferment xylose The paratyphoid B strains, almost always obtained from human sources also, ferment xylose, arabinose and dulcite rapidly, and produce alkali quickly in litmus milk The enteritidis strains are indistinguishable culturally from the paratyphoid B strains, but have distinct agglutinative reactions The suipestifer or hog cholera strains, which in almost every case are of porcine origin, ferment xylose but attack arabinose and dulcite slowly or not at all In their agglutinative reactions all these bacteria fall into this grouping, though in certain rare cases the strains of porcine origin, after being under cultivation for some time, may assume characters of the paratyphoid B group The agglutinative reactions of the paratyphoid B and hog cholera strains are not always clearly distinctive when the whole serum is used, immune serums for hog cholera strains agglutinating the paratyphoid B strains, but by absorption tests the agglutinins may be separated As Bainbridge[4] pointed out, if the immune serum is saturated with a suspension of paratyphoid B bacilli and then centrifugated, its potency for strains of porcine origin is not affected

---

[1] King W V The Effect of Cold upon Malarial Parasites in the Mosquito Host Jour Exper Med 1917 **25**, 495

[2] Jordan E O The Differentiation of the Paratyphoid Enteritidis Group Jour Infect. Dis. April 1917 **20** 457

[3] Krumwiede Charles Pratt, Josephine S and Kohn L A Studies of the Paratyphoid Enteritidis Group Jour Med Research 1917, **35**, 357

Medical Mobilization and the War

Training Camps for Medical Reserve Officers in Operation

Last week The Journal announced that three training camps for physicians were being established at Fort Riley, Kan., Fort Oglethorpe, Ga., and Fort Benjamin Harrison, Ind. There camps are already established and a fourth camp, for which details have not been worked out, is in process of establishment At Fort Benjamin Harrison, Ind, Major Percy M Ashburn will be commanding officer and Major James F Hall, assistant Other instructors will be Majors Jay R. Shook, Charles F Morse, William A. Powell and George H Scott, and Captains C C. McCornack, S S Creighton, Howard McC Snyder, Joseph E Bastion and Taylor E Darby At Fort Riley, Kan, Major William N Bispham will be commanding officer, and Charles R. Reynolds, assistant. Other instructors will be. Majors Frank W Weed, Jacob M Coffin, William W Reno, Craig R. Snyder and Henry C Pillsbury, Captains Felix R Hill, Thomas J Flynn, John J Reddy and William H Richardson, and First Lieut Harrison W Stucky At Fort Oglethorpe, Ga, Lieut.-Col Henry Page will be commanding officer and Major Roger Brooke, assistant Other instructors will be Majors Leartus J Owen, Wallace De Witt and Robert L Carswell, Captains Mahlon Ashford, Eugene G Northington, Alexander D Parce, Calvin D Cowels, Jr, Samuel J Turnbull and Royal Reynolds

The training will consist of three periods of four weeks each During the first month, the duties which the enlisted man is expected to perform will be taught, during the second month the duties of the medical officer and book instruction will be given, and the third month will be devoted to training in the field In case of emergency, it will then be possible to cut off the last month of training An ambulance and a field hospital will be established at each training camp

Organization of Training Camps

Three new branches of the medical service of the army have been announced in connection with the organization of training camps These branches are a division of sanitary inspection, to be headed by Col F P Reynolds, a district of hospitals and hospital construction, headed by Col James B Glennan, and a division of medical military instruction, headed by Col. Ed L Munson The three branches are coordinated under the direction of Col Henry A Birmingham

Colonel Glennan's division of hospitals and hospital instruction will be immediately concerned with the preparation of thirty-two hospitals for the divisional cantonments It is estimated that each cantonment hospital will have a capacity of 1,000 beds It will also be necessary to build several general clearing hospitals and one or two receiving hospitals in seaport cities

The division of Colonel Reynolds'—sanitary inspection—has to do with all sanitary matters pertaining to armies in the field, such as kitchens, mess shelters, ice boxes, and all sanitary appurtenances The work will be carried on by a corps of general sanitary inspectors, with the ranks of colonels and lieutenant-colonels A general sanitary inspector will also be attached to the commanding general of each army

Medical Reserve Officers and Registration

The President has held, according to an order of the Provost Marshal General, dated May 24, 1917, that the Selective Service Act of May 18, 1917, and the proclamation and regulations of the same date, do not require the registration on June 5 of members of any duly organized and recognized force, naval or military, subject under other laws of the United States to be called, ordered or drafted into the military or naval service of the United States The registration regulations are to be construed as providing for the exception from registration of persons in the military or naval service of the United States, which includes all officers and enlisted men of the Regular Army, the Regular Army Reserve, the Officers Reserve Corps, the Enlisted Reserve Corps, the National Guard and National Guard Reserve recognized by the Militia Bureau of the War Department, the Navy, the Marine Corps, the Coast Guard, and the Naval Militia, Naval Reserve Force, Marine Corps Reserve, and National Naval Volunteers, recognized by the Navy Department.

Visual Tests for the Medical Corps

To the Editor —You fail to mention the physical qualifications for the Medical Reserve Corps and the regular Medical Corps Many, many physicians wear eyeglasses Would this act as a disqualification or hindrance? Is myopia (in the case of physicians) or other ailments of minor character, cause for rejection or exemption? Would a commission be refused on these grounds to a physician otherwise qualified?

Answer.—The physical examination is thorough The applicant must certify that he labors under no physical infirmity or disability which can interfere with the efficient discharge of any duty which may be required Errors of refraction, if vision is not below 20/100 in either eye, are not causes of rejection, provided they are not accompanied by ocular disease and are entirely corrected by appropriate glasses With the proper correction by lenses the visual acuity of each eye must not fall below 20/20 While using the refractive correction required for distant vision, in the case of ametropic conditions, the applicant must be able to read No 1 Jaeger (.50 D Snellen) at the usual distance for near work (13 to 20 inches) while using both eyes Strabismus of any type or color blindness for red, green or violet will be a cause for rejection The foregoing requirements apply to eyes free from disease, either acute or chronic All lesions of either fundus oculi, whether old or of recent origin, as determined by ophthalmoscopic examination, will be causes for rejection A certificate from a competent oculist may be accepted at the option of the examining board as evidence of freedom from lesions of the fundus

Base Hospitals Ordered to Active Duty

The following base hospitals have been ordered to active duty and will sail shortly for England

Base Hospital No 4, Massachusetts General Hospital, Boston —The following are the medical and surgical members of this unit Frederic A. Washburn, director, Lincoln Davis, assistant director, surgical service, Roger Kinnecut assistant director, laboratory service, staff surgeons, Richard

---

[4] Bainbridge, F A, and O'Brien, R. A On the Paratyphoid Group of Bacilli, Jour Hyg, 1911, **11**, 68

F O Neil, William J Mixter, Zabdiel B Adams, Frederick C. Irving, Dewitt S Clark, George A Leland, Jr, staff physicians, E. Lawrence Oliver, James H Means, Paul D White, Wade S Wright, Joseph C Aub, Carl A L Binger, Adelbert S Merrill, roentgenologist, Oscar Teague, bacteriologist, Augustus G Reynolds, quartermaster, Henry C Marble, registrar, Henry K. Sherrill, chaplain, Ralph A. Hatch, oculist, Harold G Tobey, laryngologist, George Clymer, neurologist and alienist, William H Gullifer, dentist, William H Sherbune assistant dentist

Base Hospital No 15 The Mackay Unit of the Roosevelt Hospital, New York—The medical members of this base hospital are as follows Major Charles H Peck, director, Major James I Russell, assistant director, surgical service, Major Rolfe Floyd, chief of medical service, Capts Alfred Stillman, Harold Barclay, Clarence McWilliams, Calvin B Coulter, Henry James, Edward F Kilbane, Joseph Steiner, Gouverneur M Phelps, First Lieuts William C White Henry W Cave, John H Carlisle, Alexander T Martin, Augustus Street, William B Hetzel, John E. Williams, Lewis S Booth Robert T Buckley, Thomas C Peightal, Ralph A Hurd, dentists J C Vandervoort, John R. Merrill, chaplain, Rev Francis B Barnett.

Base Hospital No 17, Harper Hospital, Detroit—Major Angus McLean, director

Base Hospital No 18, Johns Hopkins Hospital, Baltimore—J M T Finney, director

Preparedness of Medical Officers for Development of Epidemic Meningitis

At the meeting of the General Medical Board of the Advisory Commission of the Council of National Defense, at Washington, D C, May 27, Dr Simon Flexner spoke of the preparations that the Rockefeller Institute had made for instructing medical officers in the technic and procedure for the detection of meningococcus carriers and for review of other laboratory methods that were necessary in the management of this disease Dr Flexner said, in part, that there is an urgent demand for doctors for the army and navy and that many of them had had training so recently that it would be unnecessary perhaps to supplement that training in the manner proposed Others have not had training so recently, and it might be advisable to undertake to supplement their training Undoubtedly one of the situations that will arise has to do with infectious diseases Certainly it has been the experience in European armies in this war that recruiting is attended with the appearance of contagious diseases sometimes on a considerable scale, among the new recruits, introducing diseases which must be met immediately, and which are often a real menace to the work to be carried out in their training Certain of the diseases which were formerly a severe menace among troops such as typhoid and paratyphoid, are now much better controlled These diseases have been reduced to the minimum There are other diseases for which there is no such artificial means of protection and which constitute a great menace. One of these is epidemic meningitis a disease which has been prevalent for many years It has never died out since the epidemic which appeared in the early part of the present century There is reason to believe that we shall be confronted with epidemic meningitis very soon after recruiting actually begins The disease has already appeared in certain of the camps It is desirable and necessary that we should deal with these epidemics in the most effective manner at the outset and among other things, we should give special instruction to certain numbers of medical officers in order that they may put into effect the experience recently gained abroad where these epidemics have appeared I am not a military person and therefore do not know how the people are housed but this I do know that just as soon as a case of meningitis is discovered, the rest of the men in the shack should not be permitted to mingle with the rest of the recruits until all of them have been subjected to a meningitis examination to determine whether or not any man among them is a carrier of meningococcus There is no difficulty about the sick man as he will be taken care of in the hospital and not be a menace to the rest But the men who are not in the hospital and who are carriers of the coccus will be a great menace. If they are carriers they should be discovered and can be discovered in twenty-four to forty-eight hours Those who are not carriers can be released but those who are must be looked after as carefully as the sick man and not released any more than the sick man should be released until they are no longer carriers The particular service which we should like to render is this There are at the Rockefeller Foundation many men who have had the good fortune, or misfortune, of particular experience with meningitis, and we should like the privilege of training a certain number of men who will be sent to these camps, cooperating with the clinical department, and perhaps being a part of it, who will also be doing some of the bacteriologic work of these camps We wish to qualify them with the latest knowledge which we have gained in these diseases If these men are with us four weeks we can teach them a number of supplementary things I have the highest hope that what we are doing will be done elsewhere if found to be worth while Chicago has perhaps men better versed in this special line than New York, and perhaps there are other places There is the Army Medical School, and the Navy Medical School They will doubtless do similar things Where the demand for men of this type is so great, no single organization can train enough men for this purpose We propose to carry on this work through the summer and the fall, but if it seems worth while, some other institutions will do likewise We feel confident that four weeks will be sufficient time for this work but this will have to be determined by experience We feel confident that it will be of value to know that wherever men are affected with this disease there will be at least one man who has at his fingers' end the training now in use at the recruiting stations and hospital organizations dealing with the troops abroad"

Qualifications of One Thousand Physicians for Immediate Service Abroad

To the Editor—In your Current Comment of May 26 I see that 1 000 men have been asked for service in France To whom shall I apply in order to get into this service?

Frank X Pomainville M D Grand Rapids, Wis.

To the Editor—Can you give me some information relative to the procedure qualifications, etc., of the 1,000 physicians France has asked for? More specifically, what is the remuneration, the term of service and work rendered that is in base hospitals or on the battle field? Do they go into Red Cross units or directly into the service of the French government?

Noah Zehr M D, Fort Wayne, Ind

Answer.—The 1,000 physicians mentioned are being selected from among members of the Medical Reserve Corps, who volunteer for the service by the surgeon-general's office with the assistance of the state committees of national defense To obtain this assignment abroad the applicant must be under 35 years of age, well qualified professionally and especially so physically When assigned abroad by the surgeon-general of the army, these physicians go as officers of the United States Army and are not connected with any base hospital units or attached in any way The remuneration is the same as that of the rank which they hold in the Medical Reserve Corps

Protecting the Practice of the Absent Physician

The Missouri State Medical Association at its last annual meeting adopted resolutions to the effect that those physicians who remain at home should volunteer to care for the practice of those called to service and to turn over to them or to their dependents a liberal proportion of the income of this work. Plans are being formulated for rendering the resolutions effective These plans are to be submitted to the county societies for approval——The Mississippi State Medical Association at its recent meeting adopted a resolution to the effect that each physician keep a separate record of the charges for the patients of colleagues who have left to join the government service. When the fees are collected, one third will be turned over to the absent physician or to his family, one third to the American National Red Cross and the remaining one third to the physician who undertakes the service The Red Cross fees are to be turned over to the local chapter——The New York State Medical Society agreed that each physician ask every new patient the name of his usual or last medical attendant, and if this doctor is in active service to turn over to him or to his family one third of the fees collected from the patient. Further, it was agreed that if patients are referred by a physician who has not previously referred patients and the physician is in the government service one third of the fee shall be turned back Finally, it was agreed that the physician will not attend such new patients for one year after the resumption of practice of the physician who was in the government service

Care for Dependents of Physicians

To the Editor —Will the federal government undertake the relief and support of the dependents of doctors and others who may be sent by our government across seas for service as civilians or attached to some branch of the service of the allies?

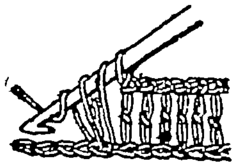
Answer.—The policy of the War Department in this regard is as yet undetermined, because Congress has not completed its consideration of military legislation In general, it may be said that the department desires, at the outset, to exempt from military service, as far as possible, those having dependents Realizing that this cannot be done in all instances, the department has requested Congress to provide an adequate sum to take care of the dependents of such as cannot be so exempted Doctors who are sent across the sea will be commissioned officers of the army, and the pay allowed by law is by the department deemed to include adequate provisions for their dependents

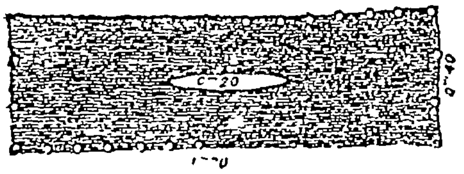
"Michelaines" for the Soldiers

To the Editor —In The Journal, Jan 23, 1915, page 353, are the directions and picture of a very fine sleeveless sweater for soldiers I am very anxious to use all my spare time knitting for the soldiers and would like very much to get this pattern if possible, as it was recommended to me by a doctor as very good

Answer —The sweaters in question were known as "Michelaines," after Dr Michel, the inventor It is a scarf which can be used as a head, throat, chest or arm protector It consists essentially of a woolen band 48 inches long and 16 inches wide, with a median slit 8 inches long, large enough for the soldier's head to pass through

The particular crochet stitch which Dr Michel recommends for this purpose is the following Use medium sized wool and a crochet needle having a diameter of one fourth of an inch 1 Make a loose chain 48 inches long 2 Crochet two extra stitches for turning 3 Throw thread over needle For the first row, take up the two threads of the chain, throw thread over, put it under the two stitches of the first loop of chain, pull through, throw thread over again, then pull through the first two, then pull through the second two, repeat to end of chain Take two stitches to turn with, proceed exactly as the first row only put through the single back stitch Crochet eighteen rows up, then on the nineteenth row stop short 4 inches from the middle, break the thread Begin on the other side 4 inches from the middle, thus leaving an 8 inch opening and crochet to the end. Continue again as before until you have eighteen more rows, then fasten the threads securely Sew on buttons as shown in the figure





Ambulance Ship Transferred to Navy—The steam yacht *Surf*, owned by Dr John A Harriss, has been loaned to the navy for the duration of the war It is to be used as an ambulance ship

***Rockefeller-Foundation* to Study Tuberculosis at the Front**—Dr Livingston Farrand, president of the University of Colorado, has been appointed by the Rockefeller Foundation to undertake a campaign against tuberculosis in France under the auspices of the foundation Aside from the small group of Americans, the personnel of his organization will be French The Rockefeller Foundation has made an initial appropriation of $100,000 for the work—central organization, the equipping of mobile units and the publication of literature. Dr Farrand has been granted a year's leave of absence so that he may have all of his time for this work.

Reserve Officers on Active Duty

The following officers have been ordered to active duty as mentioned

Major Winford H Smith, M R C, Baltimore, Md, to Washington, D C, for duty

Major Arthur C Christie, M. R C, Washington, D C., to active duty with Surgeon General of Army

Capt Louis Barth, *M R C, Grand Rapids*, Mich, to active duty at Grand Rapids

Capt Walter A. Wells, M R C, Washington, D C, to active duty at Washington

Capt Louis A Molony, Cincinnati, O, Capt. Charles T Hunt, Miamisburg, O, and First Lieut J Louis Ransohoff, Cincinnati, O, to Fort Thomas, Ky

Capt. Howard Fox, M R C., New York, from Fort Slocum, N Y to New York, medical supply depot for duty

Capt Eugene R Hochstetter, Jr, and First Lieut James D I McPheeters, M R C, Chattanooga, Tenn, now at Fort Oglethorpe, Ga, to duty at training camp at that post

Capt. William E Shea, M R C, Fort Missoula, Mont., to active duty at that post.

First Lieuts. Roy B Storms, M R C, Kempton, Ind., James M Smith, M R C, *Lehman M Dunning*, Claud Du Vall Holmes and Arthur F Weyerbacher, M R C, of Indianapolis, Ind, to active duty at Fort Benjamin Harrison, Ind

Capt James Kenan, M R *C, Selma*, Ala First Lieuts Rae W Whidden, M R. C, New York City Paul V Woolley, M R. C, Kansas City, Mo, Joseph S Gatlin, M R C, Laurel, Miss Harry B Schmidt, M R C, Detroit, Mich, *Charles D Lockwood*, M R C, Pasadena, Cal, Alpheus F Jennings, M R C. Detroit, Mich, Henry R Carstens, M R C, Detroit, Mich, and John W Sherrick, M R C, Ann Arbor, Mich, to active duty at *Washington*, D C, *Army Medical* School, for instruction

First Lieuts William L Culpepper, M R. C, Goose Creek, Tex Forrest P Baker, M R C, Booneville, Ark, *James E Dewey*, Murray C Stone and Horace A. Lowe, M R. C, of Springfield, Mo Eugene R Gordon, *M R C, McComb*, Miss, William T Fitzsimons and Oliver S Gilliland, M R C, of Kansas City, Mo, to active duty at Fort Logan H Roots, Ark.

First Lieut. Chester F S Whitney, M R. C., New York City, to report at Eastern Department for duty

First Lieuts Clarence B Francisco, M R C, Kansas City Mo and *Frank* W Snow, M. R. C, Newburyport, Mass, for instruction to Washington, D C

First Lieuts John R Brinkley, M R C, Fulton, Kans George R Tabor, M R C, Crystal City, Tex, Edward P A Ficklen, M R C New Orleans, La, Nicolo V Alessi, M R C, Hammond, La, James M Adams, M R. C, Locust Ridge, La, Arthur W C Bergfeld M R. C, Seguin, Tex, *Peter L Harvie*, M R C, Troy, N Y Lucius L Handly, M R C, Houston, Tex, Edgar L. Gilcreest, M R C, Gainesville, Tex, Louis C Kuyrkendall M R C, McAlester, Okla, John W Kinsinger, M R C, Roswell, N M Jesse W Lea, M R C, Jackson, La, William D Petit, M R C Marfa, Tex, Louis H Pate, M R C, Carlsbad, N Mex, George N Ricks, M R C, Pleasanton, Tex, *Harold A* Spilman, M R C, Ottumwa, Ia, Ralph V *Smith*, M R. C, Tulsa, Okla, Thomas H Scott, M R C Fort Morgan, Ala, Fenton M Sanger, M R C, Oklahoma City *Okla Henry O Wyneken*, M R. C, San Antonio, Tex, Leonard S Willour M R. C., McAlester, Okla, Bacil A Warren, M R C, Leupp Ariz., Albert R. Warner, M R. C Komatke, Ariz. Thaddeus S Troy, M R C., Howard L Taylor M R C, Cleveland, O Charles E Fitzsimmon, M R C, Amarillo, Tex, Ira Cohen, M R C, New York City, Frank L. Carson, M R C, Shawnee, Okla, Abraham L Blesh, M R C, Oklahoma City, Okla, Walter G Bisbee, M R C, Chandler, Okla, and Alexander A Brown, M R C, San Antonio Tex to active duty *and to report by telegraph to commanding* general, Southern Department

The following officers of M R C to active duty, Letterman General Hospital, San Francisco, Cal First Lieuts Sylvan L Haas, San Francisco, Cal, and Phillip M Thomas, Sacramento, Cal First Lieut Walter S Johnson, Los Angeles, Cal

First Lieut Harvey R Gaylord, M R C, Buffalo, N Y, to active duty at Fort Niagara, N Y

First Lieut Conrad Berens, Jr., M R C, New York City, to active duty at Mineola, Long Island, N Y

The following officers of M R C to active duty at Fort Sheridan, Ill First Lieuts Henri S Babcock, Danville, Ill, Ashley B Morrill, Chicago, Ill, Claude H *Ogden*, Gary, Ind Walter A Ford, Kankakee, Ill Morris Fishbein, Roy T Rodaway, Charles D Eldred, Louis Rudolph, Arthur C Gillam, Chicago, Ill, and John W *Tope*, Oak Park, Ill

First Lieut Charles L Gaulden, M R C, Elizabeth, La., to Fort Myer training camp, for duty

First Lieut. Francis C Tyng, M R. C, Salt Lake City, Utah, at Fort Douglas, Utah

First Lieut. Frank R. Mount, M R. C., Oregon City, Ore., to Fort Worden, Wash First Lieut Charles R Glenn, Kelso, Wash, to Fort Lawton, Wash

Capt Lewis W Falkner, M R C, Youngstown, N Y, to training camp at Fort Niagara, N Y

Major Louis C Duncan, M C., Ft Bliss, Tex, to citizens' training camp Fort McPherson, Ga.

First Lieut. Charles W Rauschenbach, M R. C, Baltimore, Md to Fort Myer

First Lieut. Arthur W Allen, *M R. C., Boston*, Mass, to Boston

First Lieuts John H Carlisle, Passaic, N J, and Frederick G Coodridge, M R C, Comfort Center, Conn, to Governors Island, New York

Resignation by First Lieut Timothy J Butler, M R. C, Eagle Pass, Tex of commission that corps accepted

Following officers of Medical Corps to report to Surgeon General of Army for temporary duty Col James D Glennan, Lieut Col Edward L Munson and Lieut Col Frederick P Reynolds (May 17 War D)

Lieut Col. Jere B Clayton M C., to Fort Logan H Roots Ark, for duty (May 5, S D)

Major William N Bispham M C, relieved at Fort Sheridan, to Fort Riley, citizens training camp, for temporary duty (May 16, War D)

Major George H R Gosman, M C, from further duty in Southern Department to Fort Ethan Allen, Vt, for duty (May 18, War D)

Par 57, S O 111 May 14, 1917, War D, relating to Major Charles F Craig M C is revoked (May 18, War D)

Major Percy L. Jones M C to Philadelphia, Pa as assistant in organization. (May 16, War D)

Major James D Fife M C, from Fort Sam Houston to St Louis Mo for duty as commanding officer, Base Hospital No 21, (May 5, S D)

Capt. Paul W Gibson M C, from Fort Slocum to New York N Y, medical supply depot for duty (May 18 War D)

The following officers of Medical Corps to the place named for temporary duty with Reserve Engineer regiment specified Capt Harry H Van Kirk to New York, 1st Engineers Capt Albert S Bowen *to* St. Louis Mo 2d Engineers Capt William H Thearle to Chicago Ill 3d Engineers Capt. Albert P Clark to Boston Mass. 4th Engineers Capt. Joseph Casper to San Francisco Cal 5th Engineers Capt Edward I Napier to Detroit, Mich 6th Engineers Capt Wibb E *Coper* to Atlanta Ga. 7th Engineers Capt Howard Clarke to San *Francisco* Cal 8th Engineers Capt Daniel F Maguire to *Philadelphia* Pa, 9th Engineers (May 16 War D)

Capt John P Fletcher, M C, El Paso, Texas, to Washington, field medical supply depot temporary duty (May 18, War D)

Capt Francis X Strong, M C, to charge of medical supply depot, El Paso, Texas (May 18, War D)

First Lieut Paul A Schule M C, to Fort Snelling, Minn, to establish field laboratory at that post (May 18 War D)

Major James I Mabee, M C, to Pittsburgh, 5th Reserve Engineers, for temporary duty (May 21 War D)

So much of Par 31 S O 113, May 16 1917, War D as relates to Capt Joseph Casper, M C, is revoked (May 21, War D)

First Lieut John P Lord, M R C, to active duty at Fort Omaha (May 19, War D)

Following officers, M R C, to active duty and to place indicated for duty First Lieuts Ernest W Cavaness to Kansas City, Mo Lloyd Thompson to Little Rock, Ark Marvin S Veal, Daniel Boone, Ky, to Louisville Ky Edward C Ellett to Memphis, Tenn, Benjamin B Rowley, Whitefish Bay, Wis, to Milwaukee Wis Capt Joseph R Hollowbush to Rock Island Ill, 1st Lieuts David M Berkman, Rochester Minn, to St Paul, Minn Harold S Arnold, New Haven, Conn, to New London Conn Peter L. Geaugh, Pawtucket R I to Newport R I Rowland B Moore to Portland, Me, William H McLan to Wheeling W Va Eric A Fennel to Cincinnati Ohio Capt. John G Stowe to Buffalo, N Y 1st Lieuts William J Du Bois to Grand Rapids Mich, Francis X Mulherin, Augusta, Ga, to Savannah, Ga, Frank R Ruff, Duke, N C, to Wilmington N C., *and Solomon* P Klotz, McComb Miss., to Vicksburg Miss, Capt Frederick T Brown to New *Orleans*, La 1st Lieut *Horace* F Stiltner, Chickamauga, Ga to Chattanooga Tenn Major Francis L Parker to Charleston, S C 1st Lieut Robert Goldthwaite to Montgomery, Ala Capt John O Rush to Mobile Ala 1st Lieuts Samuel Aronovitz to Jacksonville, Fla Jerre G Lynch to Los Angeles Cal George S Buck to Portland, Ore Donald V Trublood to Seattle, Wash Verne R Mason to Baltimore Md, J Adolph Rollings Roda, Va, to Norfolk, Va and Meredith I Samuel to Wilmington Del Capt Moses H Darnall to Washington, Capt. Walter H Moursund to Dallas Texas, and 1st Lieut Eugene V Powell, Fort Worth Texas to Galveston, Texas

STATE COMMITTEES OF NATIONAL DEFENSE, MEDICAL SECTION

The General Medical Board of the Advisory Commission of the Council of National Defense announces that it has found it necessary in order to coordinate the activities of the various organizations now engaged in promoting medical preparedness to merge these organizations into a single body in each state. Since the various state committees of American Physicians for Medical Preparedness were organized about a year ago, and especially since the situation has become acute many independent committees and other organizations have been formed, each vying with the other to show its patriotism and to accomplish the utmost good in a medical military way for the nation

The existence of so many independent agencies involes duplication of effort and lacks directness of purpose It is believed that these defects will be corrected by the plan that the Committee has just adopted The committees and organizations that are to be merged in the new state committees include the following

1 Members of the National Committee of the General Medical Board
2 The original state Committees of American Physicians for Medical Preparedness
3 The presidents and secretaries of the state medical societies
4 The chairman of the Governor's committee of the State Committee of Defense
5 Representatives of the American National Red Cross, the Medical Reserve Corps, medical officers of the National Guard and medical schools
6 Members of the National Committee of the Committee of American Physicians for Medical Preparedness presiding in each state.
7 Other physicians who have been especially active in *cooperating* with various committees with the Surgeon-General's *Office*, and with the General Medical Board

The new committees which will be known as the State Committees of National Defense, Medical Section, are as follows

ALABAMA

Baker James N, Chairman, Montgomery
Green Henry Pres Dothan
Perry Henry G Sec Montgomery
Blue John H Bell Bldg Montgomery
Cole Herbert P Van Antwerp Bldg Mobile
Drennan W Earle, Woodward Bldg. Birmingham
DuBose F G *902* Alabama Ave Selma
*Goldthwaite R 13½ S Perry St Montgomery
Hill R S, 21 S Perry St Montgomery
*Lowry John *727* 1st Nat Bk Birmingham
McLester James Empire Bldg Birmingham
Morris L C Empire Bldg Birmingham
Rush John R 412 Antwerp Bldg Mobile
Sanders W H Chairman State Com Pub Health 418 S Lawrence St Montgomery
Wilson, Cunningham 1107 S 20th St Birmingham

ARIZONA

Shine F E. Chairman Bisbee
Ferguson Robert Pres State Med Assn Bisbee
Yount C E Sec State Med Assn. Prescott
Bacon John E. Miami
Huffman L E, 40 S Stone Ave Tucson
Looney Robert N Sec State Bd of Health, Prescott
Palmer E. Payne Goodrich Bldg, Phoenix
Redewill, Francis H 120 N 1st Ave Phoenix
*The *Surgeon* Ft. Huachuca
*The Surgeon U S Troops, Douglas
*The Surgeon Ft. Apache
Thomas John Wix Sec. Bd. Med Exam., Nat Bk. of Ariz. *Bldg* Phoenix
Tuthill A M Morenci

ARKANSAS

Smith W F Chairman Urquhart Bldg Little Rock
Norwood M L, Pres. State Med Assn Lockesburg
Meriwether C P State Med Assn. Little Rock
Brooksher, W R First Nat. Bk Bldg Fort Smith
*Commanding Officer Army and Navy Gen. Hosp Hot Springs
Garrison, C W State Health Officer Little Rock
Jordan A C, Mchts and Planters Bk Bldg Pine Bluff
Mann, R. H T, Texarkana
Ogden M D, Bkrs Tr Bldg Little Rock
Runyan *Joseph P* State Bk. Bldg, Little Rock
Stout T J Sec St Med Bd Brinkley
Vinsonhaler Frank Mann Bldg Little Rock

CALIFORNIA

Sherman Harry M Chairman, 350 Post St. San Francisco
Kress Geo H, Pres State Med Assn, Los Angeles
Barbat J Henry *275* Post St, San Francisco
Barlow W Jarvis Security Bldg Los Angeles
**Com* Officer Letterman Gen Hospital Presidio San Francisco
Huntington T W 516 Sutter St., San Francisco
*Kneedler Maj Wm J Coronado
*Kyle John J Little Ins *Bldg Los* Angeles
Moore E. C Mchts Nat Bk Bldg, Los Angeles
Newman Henry Parker Timken Bldg, San Diego *Calif*
Pinkham, Charles B Sec, Bd of Med Exam Forum Bldg Sacramento
Pope Saxton T Butler Bldg San Francisco
Sawyer, Wilbur A. Sec, St Bd of Health *3123 T* St. Sacramento
Sherk, Henry H Central Bldg Pasadena Calif
Smith Rae E *Brockman* Bldg Los Angeles
Stillman Stanley 2102 Webster St San Francisco
Wilbur Ray Lane Hospital San Francisco
Rixford Emmett, 1795 California St San Francisco

COLORADO

*Grant W W Chairman, Mack Block, Denver
McGruder A C Pres. State Med Assn Colorado Springs
Epler Crum Sec State Med. Assn Pueblo
*Amesse John W, Metropolitan Bldg Denver
*Carmody, Thomas E, Metropolitan Bldg Denver
Corwin, R W Minnequa Hospital, Pueblo
Espey John R Main and Walnut Sts Trinidad
Freeman Leonard, Metropolitan Bldg, Denver
*Hall *Josiah* N Metropolitan Bldg Denver
Jackson Edward *Majestic* Bldg, Denver
McKelvey S. R Sec and Exec Officer St Bd of Health, [illegible]403 W 32d St, Denver
*Powell Cuthbert Metropolitan Bldg Denver
Powers C A Metropolitan *Bldg*, Denver
Sewall Henry Majestic Bldg, Denver
Shere O M, Metropolitan Bldg Denver
Strickler, *David* A Sec. St Bd of Med Examiners Empire Bldg Denver
*Surgeon Ft. Logan
Wetherill, H G Metropolitan Bldg Denver

Examiners

CONNECTICUT

Brown, D Chester, Chairman, Danbury
Garlick, S M, Pres, Bridgeport
Scarborough, M M, Sec., New Haven
Black, John T, Sec, State Bd of Health, New London
*Churchman, J W, New Haven
*Dowling, J F, Hartford
Flint, Joseph M., 320 Temple St, New Haven
Godfrey, C G, 340 State St, Bridgeport
McClellan, Wilbert E, 18 Asylum St, Hartford
*McDonnell, Ralph, New Haven
*McKnight, E J, 110 High St, Hartford
Overlock Seldom B, Pomfret
Smith, Edward W, 34 W Main St., Meriden
Steiner, Walter R, 4 Trinity Place, Hartford
Tuttle Charles A, Sec Conn Med Exam Bd, New Haven
*Verdi, William F, 27 Elm St., New Haven

DELAWARE

Draper, James A, Chairman, 1015 Washington St., Wilmington
Beebe, James, Pres, State Med Assn, Lewes
Forrest, George W K, Sec, State Med Assn, Wilmington
Briggs, Henry W Sec. Treas, Med Council of Delaware, Wilmington
Frantz A E, Sec and Exec Off St Bd of Health, Wilmington
Palmer, John, 1900 Delaware Ave, Wilmington
Springer, Harold L, 1013 Washington St, Wilmington
Stubbs, Henry J, 1204 Delaware Ave, Wilmington
Washburn Victor D, 826 Washington St, Wilmington

DISTRICT OF COLUMBIA

Vaughan, George T, Chairman, 1718 I St, N W, Washington
Davidson, Edward Y, Pres., Washington
Macatee, H C, Sec, Washington
Adams, S S, 1801 Connecticut Ave, Washington
Bovee, John Wesley, 815 Connecticut Ave, Washington
Braisted, W C, U S Navy, Surg Gen, Washington
Blue, Rupert, U S P H S, Surg Gen, Washington
*Commandant, Army Med School, Washington
Gorgas, W C, U S Army, Surg Gen, Washington
Hardin, B L., Washington
*Hooe, A Barnes, 1220, 16th St, Washington
Kean, Col Jefferson R, American Red Cross, Washington
Noble Robt E, Maj M C, U S Army, Washington
Mitchell, J F, 1344, 19th St, N W, Washington
Phelps, Earl, Sec, Dist. of Col Exam Bd, Washington
Richardson, J J, 1509, 16th St, N W, Washington
Ruffin, Sterling, 1335 Connecticut Ave., N W, Washington
Sowers, W H H, Jr, Washington
Stone, Isaac S, Stoneleigh Court, Washington
*Webb, Maj W D, U S Army, 1803 Conn Ave, Washington
Wilmer, William H, 1610 I St, N W, Washington
Woodward, W C, Health Officer, Washington

FLORIDA

Rogers, Carey P, Chairman, 1433 Riverside Ave., Jacksonville
Warren, Edmund W, Pres State Med Assn, Palatka
*Henson, Graham E, Sec, State Med Assn, Jacksonville
Boyd, John E, St. James Bldg, Jacksonville
Fogarty, J N, 227 Duval St, Key West, Fla
Helms, John S, Citizens Bk Bldg, Tampa
Hutchinson, Clarence E, Brent Bldg, Pensacola
*McRae, E H, Am Bk. Bldg, Tampa
Porter, Jos Y, Sec. and St. Health Officer, 2d and Julia Sts, Jacksonville
*The Surgeon, Key West Barracks
*The Surgeon, Ft Barrancas
Swift, Milne B, Orlando
Turck, R C, Consolidated Bldg, Jacksonville
Warren, E W, Sec, State Bd. of Med Exam, Palatka

GEORGIA

Hardin, Louis Sage, Chairman, Hurt Bldg, Atlanta
Dean, Jarvis D, Pres, State Med Assn, Dawson
Lyle William C., State Med Assn, Augusta
Doughty, William H, 822 Greene St, Augusta
Goss Ralph M, Athens
Hardman L G, Commerce
Harris, H F, Sec and Director of Lab, St. Bd of Health, State Capitol, Atlanta
McRae, Floyd W, Peters Bldg, Atlanta
*Murphy, Eugene E, 433 Telfair St, Augusta
Noble, George H, 186 S Pryor St, Atlanta
Nolan, C. T, Sec, State Bd of Med Examiners, Marietta
Roy, Dunbar, Grand Opera House, Atlanta
*Surgeon, Ft McPherson.
*Surgeon, Ft Oglethorpe
*Surgeon, Ft. Screven
Waring, T Pinckney, 10 W Taylor St, Savannah
Williams Howard J, 722 Spring St, Macon

IDAHO

Carithers, W H, Chairman, Moscow
Moody, Charles S, Pres, State Med Assn, Hope
Maxey, Edward E, Sec., State Med Assn, Boise
Brandt, Franz H., Overland Bldg, Boise
Cline, Clifford M, Idaho Falls, Idaho
Dittman, Charles A, Sec., State Board of Med Examiners, Burke
Falk, Ralph, Sec., St Board of Health, Boise
Howard William F, Kane Bldg, Pocatello
Schaff, Charles W Lewiston
*Wood, Marshall W, Lieut Col, U S Army, Boise

ILLINOIS

McArthur, L L, Chairman, 122 S Michigan Ave, Chicago
Noble, William L, Pres, 32 N State St, Chicago
*Gilmore, W H, Sec, Mt Vernon
Abeken, A. B, Surgeon, U S Navy, Great Lakes Training Station, Great Lakes
Andrews, E Wyllys, 122 S Michigan Ave., Chicago
Besley, Frederic A, 104 S Michigan Ave., Chicago
Bevan, Arthur Dean, 122 S Michigan Ave., Chicago
Billings, Frank, 122 S Michigan Ave., Chicago
Bispham, W, Maj M C, U S Army, Federal Bldg, Chicago
Cobb, Joseph P, 29 E Madison St, Chicago
*Davis, Carl, 122 S Michigan Ave, Chicago
Dodson, John M, 25 E. Washington St, Chicago
Drake, C St Clair, Sec. and Exec Officer, St Bd of Health, Capitol Bldg, Springfield
Farrell, P J H, 25 E Washington St. Chicago
Frank, Jacob, 25 E Washington St, Chicago
*Hornsby, John A, 111 W Washington St Chicago
Kahlke, Charles E., 25 East Washington St, Chicago
Kanavel, Allen B, 30 N Michigan Ave, Chicago
Kendall, A I, 2431 Dearborn St, Chicago
*Kreider, George L, 522 Capitol Ave, Chicago
Lewis, Dean D, 122 S Michigan Ave., Chicago
Lewis, Henry F, 29 E Madison St Chicago
Logan, W H G, 29 E Madison St, Chicago
Martin, Franklin H, 30 N Michigan Ave., Chicago
Percy, James F, 147 S Cherry St, Galesburg
Ochsner, Albert J, 2106 Sedgwick St, Chicago
O'Neill, A Augustus, 4607 Champlain Ave., Chicago
de Roulet, Alfred I, 15 E Washington S, Chicago
Stanton, S C, 535 N Dearborn St, Chicago
*Steele, D A K, 30 N Michigan Ave, Chicago
Stephenson, W C, Col M C, U S Army, Federal Bldg, Chicago
Sullivan, Norman, Surgeon U S Navy, Great Lakes Training Station, Great Lakes
*Wilder, William H, 122 S Michigan Ave, Chicago
*Wheaton, Clarence L, 2733 N Clark St., Chicago
Wyneken, George E, Chicago College of Medicine and Surgery, Chicago
Frothingham, Herbert, 4304 Lake Park Ave, Chicago

INDIANA

Eastman, Joseph R., Chairman, 331 N Delaware St., Indianapolis
Oliver, John H, Pres, 122 N Delaware St., Ft. Wayne
Combs, Charles N, Sec., 128 S 6th St, Terre Haute
Amerson, C P
Barnett, Charles E, 902 Calhoun St, Ft. Wayne
*Clark, Edmund D, Hume Mansur Bldg, Indianapolis
Clark S A, J M Studebaker Bldg, South Bend
Gatch, Willis D, Hume Mansur Bldg, Indianapolis
Gott, W T, Sec, State Board of Medical Registration and Examination, Capitol Bldg, Indianapolis
Keiper, George F, 14 N 6th St., Lafayette
*McCulloch, Charleton B, State Life Bldg, Indianapolis
Pfaff, George P Indianapolis
Porter, Miles F, Physicians Defense Bldg, Ft Wayne
Rice, S M, Rose Dispensary Bldg, Terre Haute
*The Surgeon, Ft Benjamin Harrison
Walker, Edwin, 712 S 4th St, Evansville
*Wells, Geo M, Maj, U S Army, Hume Mansur Bldg, Indianapolis
Hurty John N, Sec, State Board of Health Indiana State House, Indianapolis

IOWA

Pearson, W W, Chairman, Equitable Bldg, Des Moines
Herrick, John I, Pres, Hofman Bldg, Ottumwa
Throckmorton, T B, Sec, Equitable Bldg, Des Moines
Fairchild, D S, Jr, Wilson Bldg, Clinton
Fay, Oliver, James, Equitable Bldg, Des Moines
Macrae, Donald, Jr, City National Bank Bldg, Council Bluffs
O'Keefe, J E, Commercial Bldg, Waterloo
Rockafellow, J C, Equitable Bldg, Des Moines
Rowan, N J, 227 N Clinton St, Iowa City
Sumner, Guilford H, Sec, State Bd of Health and Med Examiners, Capitol Bldg, Des Moines
*Surgeon, Fort Des Moines

KANSAS

Gray, George M, Chairman, Portsmouth Bldg, Kansas City
May, James W, Pres, Portsmouth Bldg, Kansas City
Huffman, Charles S., Sec., Columbus
Basham, David W, Schweiter Bldg, Wichita
Crumbine, S J, Sec., State Board of Health, Topeka
Dykes, Henry A., Sec, State Bd of Examiners, Lebanon
Murdock, Samuel Jr Sabetha
Stewart, Robert B, New England Bldg, Topeka
Sawtell, Joseph E, 632 Orville Ave, Kansas City
*Surgeon, Ft Riley
*Surgeon, Ft. Leavenworth
*Scales, Herbert L, 506 Avenue A, Hutchinson
Sutton, Walter S, 650 Everett Ave, Kansas City

KENTUCKY

Sherrill, J G, Chairman, Atherton Bldg, Louisville
Board, Milton, Pres, Starks Bldg, Louisville
McCormack, A. T, Sec, Bowling Green
Abell, Irving, Atherton Bldg, Louisville
Barrow, David, 148 Market St, Lexington
Boyd, Frank, City Nat Bank Bldg, Paducah
*Fort, Frank T, Atherton Bldg, Louisville
McMurtry Lewis S, Atherton Bldg, Louisville
Jackson, John D, Danville

LOUISIANA

Clark, S M D, Chairman, 106 Baronne St, New Orleans
Maes, Urban, Sec., Maison Blanche Bldg, New Orleans
DeBuys, L R., Sec., State Med Assn, New Orleans
Dowling, Oscar, Pres, State Bd of Health, Commercial St, Shreveport
*Dyer, Isadore, 124 Baronne St, New Orleans
Gessner, H B, Maison Blanche Bldg, New Orleans
Guthrie, J B, Maison Blanche Bldg, New Orleans
Leckert, E L, Sec, State Board of Exam, 830 Canal St., New Orleans
Matas, Rudolph, 2255 St Charles Ave, New Orleans
*McVea, Charles, Baton Rouge
Miller, C Jeff, 124 Baronne St, New Orleans
Parham, Frederick W, 741 Carondelet St New Orleans
Seeman, W H, Pres State Med Assn, New Orleans
*Surgeon, Jackson Barracks
Willis James C, Cont Bank Bldg, Shreveport

MAINE

*Cousins, W L, Chairman, 181 State St Portland
Hart W I, Pres, Camden
Thompson, John B, Sec., 109 State St, Bangor
Abbott Edville G, 156 Free St, Portland
Peters, William C, First National Bank Bldg, Bangor
Searle, Frank W, Sec, Board of Registration of Med, 776 Congress St, Portland
Simmons, Wm H, 30 High St, Bangor
Spear, Walter M, Rockland
*Surgeon, Ft Williams
Thayer, A S, Portland
Wakefield, R W, Bar Harbor
*Whittier, F N, Brunswick
Young, A S, Sec, State Bd of Health, State House Augusta

MARYLAND

Young, Hugh H, Chairman, Brady Urological Inst Baltimore
Steele, Guy Cambridge
France, J I, Sec, Maryland Trust Bldg, Baltimore
Baer, W S, 4 East Madison St, Baltimore
Bloodgood, Joseph C, 904 N Charles St., Baltimore
*Davis, John S, 1200 Cathedral St, Baltimore
Finney, J M T, 1300 Eutaw Place, Baltimore
Follis Richard H, 3 E North Ave, Baltimore
Fulton, John S, Sec State Bd of Health, 16 W Saratoga St Baltimore
Harrison, A C, 31 E North Ave, Baltimore
Janeway, Theodore, Johns Hopkins Univ, Baltimore
Martin, Frank, 1000 Cathedral Ave, Baltimore
Scott, J McP, Sec Exam Board 137 W Washington St. Hagerstown
Shipley, R A, 1827 Eutaw Place Baltimore
Smith, Winford, Johns Hopkins Hospital, Baltimore

Thayer W S, 406 Cathedral St, Baltimore
Walker George, 1 E Centre St, Baltimore
Welch, William H 807 St Paul St Baltimore
Wilson Gordon, 4 E. Preston St, Baltimore
Kelly Howard 1418 Eutaw Place Baltimore

MASSACHUSETTS

Blake John B Chairman, 657 Boylston St Boston
Woodward Samuel B Pres, 58 Pearl St Worcester
Burrage, Walter L Sec 282 Newbury St Boston
*Arnold Horace D Harvard Med School Boston
Bowers Walter P Sec. Board of Registration in Medicine State House Boston
Cushing Harvey Peter Bent Brigham Hospital Boston
Davis Lincoln 206 Beacon St, Boston
Edsall David L 80 Marlboro St, Boston
Gage Homer 72 Pearl St Worcester
Greenough Robert B 10 Gloucester St Boston
Lee Roger I 51 Brattle St. Cambridge
Lovett Robert W, 234 Marlboro St. Boston
Lund Fred Bates 527 Beacon St Boston
*Lynch Charles F 327 Main St, Springfield
McLaughlin Allan J Chairman State Dept. of Health State House Boston
*Mixter S J 180 Marlboro St Boston
Porter Charles A 116 Beacon St Boston
Strong Richard P Harvard Med School Boston
Seelye R H 72 Chestnut St Springfield
Warren John 58 Beacon St. Boston

MICHIGAN

*Peterson Reuben Chairman 620 Forest Ave Ann Arbor
Biddle A P Pres David Whitney Bldg, Detroit
Warnshuie F C Sec. 91 Monroe Ave Grand Rapids
Ballin Max 355 Woodward Ave Detroit
Burkart John L Sec State Bd of Health Lansing
*Case J T Battle Creek Sanitarium Battle Creek
*Hafford Dr, Albion
Haughey William H 24 W Main St Battle Creek
*Hornbogen A W Savings Bank Bldg Marquette
Jennings Dr Detroit
*Nancrede C B G Cutting Apartments Ann Arbor
Manwaring J G R Dryden Bldg Flint
McClure Roy Detroit
McLean Angus David Whitney Bldg Detroit
Parker Walter R 1025 Whitney Bldg Detroit
Smith Eugene 32 Adams St Detroit
*Smith Richard R Metz Bldg Grand Rapids
Vaughan Victor C 221 State St Ann Arbor
*Wile Udo University Hospital Ann Arbor

MINNESOTA

Law Arthur A Chairman Syndicate Bldg, Minneapolis
Workman H M Pres Tracy
McDeavitt Thomas Sec. Lowry Bldg St Paul
*Corbett James G Minneapolis
Greene C L Lowry Bldg St Paul
Judd Edward S Rochester
Magie W H Sellwood Bldg Duluth
*Mayo Charles Rochester
Mayo William J Rochester
McDeavitt Thomas S Sec. State Board of Exam Capitol Bldg St Paul
*McCaughey Hugh F 216 Center St Winona
Palmer W L Albert Lea
Ritchie, H P, Lowry Bldg, St Paul
*Surgeon Ft Snelling
Tuohy, E L., Fidelity Bldg Duluth
Bracken H M, Sec State Bd of Health Capitol Bldg St Paul

MISSISSIPPI

Shands, H R, Chairman, Century Bldg, Jackson
Dye Thomas M Pres Clarksdale
Howard E F, Sec. First Nat Bank Bldg Vicksburg
Austin L B, Rosedale
*Barksdale J W, Winona, Miss
*Cooper J W, Meridian
*Crawford Walter W South Miss Infirmary Hattiesburg
Darrington, John, Yazoo City
Dobson W B, Century Bldg Jackson
*Ewing J S, First Nat. Bank Bldg Vicksburg
Gilleylen, J D Sec., State Board of Health Capitol and Mill Sts, Jackson
Leathers W S Director of Public Health State Board of Health, Oxford
Sessions, R D, 113 S Commerce St Natchez

MISSOURI

Frick W J Chairman Rialto Bldg Kansas City
Welch J Franklin Pres Salisbury
Goodwin, Edward J Sec. 3517 Pine St. St Louis
Adcock J A B, Sec State Bd of Health, 325 E High St Jefferson City
Bartlett Willard Metropolitan Bldg, St Louis
*Binnie, J F Rialto Bldg Kansas City
Brown John Y, Metropolitan Bldg St. Louis
Clapton M B Humboldt Bldg St Louis
Duke W W Waldheim Bldg Kansas City
Hill Roland 4500 Olive St St Louis
*Hume, John R Doniphan
Jackson Jabez N, 12th and McGee Sts Kansas City
*Love Joseph W Woodruff Bldg, Springfield
*Luedde, William H. Metropolitan Bldg St. Louis
*Martin Daniel St. Joseph
McCallum F L Lathrop Bldg Kansas City
*McVay James R Trenton
Murphy Fred T Euclid Ave and Kingshighway St. Louis
*Ravenel M P Univ of Missouri Columbia
*The Surgeon Jefferson Barracks
*Tainter F J, St. Charles
Wallace C H 301 N 8th St. St. Joseph

MONTANA

Witherspoon, T C, Chairman Murray Hospital Butte
Donovan John A Pres Phoenix Bldg Butte
Balsam E G Sec. Stapleton Bldg Billings
Armstrong Henry E Stapleton Bldg Billings
Campbell Donald Murray Hospital Butte
Cogswell W F Sec. State Bd of Health Helena
Irwin James H First Nat. Bk. Bldg Great Falls
Murray T J Murray Hospital Butte
*Riddell William C, Sec. State Bd of Med Exam, 504 Dearborn Ave Helena
Spelman J F Electric Bldg Anaconda
*Surgeon, Ft Missoula
Vidal C E K. Ford Bldg Great Falls

NEBRASKA

Summer John E, Chairman Brandeis Theater Bldg Omaha
Milroy W F Pres Brandeis Theater Bldg Omaha
Aiken J M Sec. Brandeis Theater Bldg Omaha
Allenburger C. A. Columbus
*Banister John M Col. U S Army 400 Brandeis Theater Bldg Omaha
Bryant De Witt C Omaha
Cummins Herschell B Sec. State Bd of Health Seward
Jonas A F, Brandeis Theater Bldg Omaha
Lord, J P, City Nat Bk Bldg, Omaha
*Sturdevant, Lazelle B, 2757 Holdrege St Lincoln

NEVADA

MacLean Donald, Chairman, Carson City
*St Clair, Raymond, Pres, Nixon Bldg Reno
Samuels W L, Sec Masonic Temple Bldg Reno
Lee Simeon L Sec, State Bd of Med Exam, Carson City
Lewis A Parker, Masonic Temple Bldg, Reno
McKenzie, George, Thomas Bigelow Bldg Reno
Mullin R H, Sec., State Bd of Health Reno
Ostroff, Henry Odd Fellows Bldg, Reno
Turner, D A Goldfield

NEW JERSEY

Dickinson C K., Chairman, 280 Montgomery St Jersey City
Marvel Philip, Pres 1616 Pacific Ave, Atlantic City
Gray Thomas N Sec 20 Halsted St, East Orange
Costill H B, 21 N Clinton Ave., Trenton
Emerson Linn Metropolitan Bldg, Orange
Fox, W W 1616 Pacific Ave, Atlantic City
Gray, F D 61 Madison Ave Jersey City
Hedges, Benjamin V 703 Watchung Ave., Plainfield
*Kraker, David A, 236 Broad St., Newark
MacAlester Alex Sec State Bd of Exam, 429 E State St. Trenton
McCoy John C 292 Broadway, Paterson
Price Jacob C Sec, State Bd of Health Branchville
*Williams Gurney, 3915 Atlantic Ave Atlantic City

NEW HAMPSHIRE

Gile John M Chairman Hanover
Fritz, Emdon Pres. 913 Elm St Manchester
Sullivan D E, Sec 7 N State St Concord
Crosby Walter T Sec, State Med Bd Beacon Bldg Manchester
Faulkner H R. 78 West St, Keene
Foster G S 967 Elm St Manchester
Kittridge Frank E Masonic Temple Nashua
Shea A W 248 Main St Nashua
Stillings Ferdinand A 42 Pleasant St Concord
Walker Charles R 18 Park St. Concord
Watson Irving A Sec State Bd of Health State House Concord

NEW MEXICO

Elder John W Santa Fe Hospital Albuquerque
Losey, C S Pres, East Las Vegas
McBride, R. E, Sec. Las Cruces
Angle George K. Silver City
Bradley R. L. Roswell
Carrier F N Santa Rita
Kaser W E Sec. State Exam Bd East Las Vegas
McClanahan Sec State Bd of Health East Las Vegas
*Surgeon Ft Bayard
*Surgeon Columbus

NEW YORK

Stewart George David Chairman 616 Madison Ave New York
Tinker M B Pres 105 Aurora St Ithaca
Crandall F M Sec. 113 W 95th St New York
Biggs Herman, Commissioner State Dept of Health 113 W 57th St New York
Brewer George E., 16 E 64th St. New York
Brinsmade, William B 200 Hicks St. Brooklyn
*Coe Maj Henry C, 40 E 41st St. New York
Connell Karl A. 45 W 50th St. New York
Copeland R S 58 Central Park W New York
Derby, Richard, 116 E 79th St, New York
Flexner, Simon 66th St and Avenue A, New York
Gibson, Charles L, 72 E 54th St, New York
Gleason, W Stanton, 143 Grand St Newburgh
Goldwater S S, Mount Sinai Hospital New York
Hartsock, F M, Lt Col U S Army, 543 Greenwich St New York
James Walter B, 7 E 70th St., New York
Lambert, S W, 130 E 35th St, New York
Mabee James I Maj U S Army, Madison Barracks Sasket Harbor P O
McKernon James F 62 W 52nd St, New York
Minton, Henry B, Pres State Bd of Med Exam 165 Joralemon St Brooklyn
Peck Charles H, 30 W 50th St, New York
Polk, W M, 310 5th Ave New York
*Shaw, Henry L, 361 State St, New York
*Smith, Herbert A, 506 Delaware Ave Buffalo
Sondern Fred E, 200 W 56th St New York
Squier J Bentley 71 W 55th St, New York
*Surgeon Plattsburg Barracks
*Swan John M 457 Park Ave, Rochester
Vander Veer E A 28 Eagle St, Albany
Vander Veer Albert 28 Eagle St, Albany
Van Bueren, Fred T Jr 812 Park Ave New York
Zinsser, Hans 320 W 104th St, New York

NORTH CAROLINA

Long John Wesley Chairman, Greensboro
Laughinghouse C O, Pres, Greenville
Hays, Benjamin K, Sec Oxford
Banner, Charles W, Banner Bldg Greensboro
Biggs H M, Rutherfordton
Fletcher, M H 17 Church St, Asheville
Gibbon Robert L, Independence Bldg, Charlotte
Long Maj John W, 119 Church St., Greensboro
Lynch James Madison Medical Bldg Asheville
Rankin, Watson S Sec State Bd of Health 507 N Blount St, Raleigh
Royster Hubert A., Sec. State Bd of Exam 423 Fayetteville St. Raleigh
Stokes, James E, Salisbury
*Surgeon Ft. Cassell
Taylor David T Washington
Wood E 201 Chestnut St, Wilmington

NORTH DAKOTA

Quain Eric P Chairman Bismarck
LaRose, Victor J Pres Bismarck
Rowe H J, Sec Casselton
Acher R Valley City
Aylen James P Edwards Bldg, Fargo
Campbell Robert D 2½ S 3d St, Grand Forks
*Fisher Albert M Bismarck
Gillette John M, University
McCannel A J Minot
McGurren C J Sec State Bd of Health, Devils Lake
Moore, J G Bismarck
Ramstad N Oliver Bismarck
Stockney Victor H Dickinson
Wheeler Henry M 2½ S 3d St, Grand Forks
Williamson G M Sec State Bd of Exam Grand Forks

OHIO

Lower William E Chairman The Osborn Cleveland
Gibbon, H B Pres 103 E Perry St. Tiffin
Selby C D Sec Spitzer Bldg Toledo
Bowers L. G 140 W 4th St, Dayton
*Bunts Frank E 1021 Prospect Ave. Cleveland
*Crile George W Osborn Bldg Cleveland

Hall, Joseph A, 628 Elm St, Cincinnati
Hamann, C A., Osborn Bldg, Cleveland
Hamilton, Charles S, 150 E Broad St., Columbus
Hoover, C F, Rose Bldg, Cleveland
*Maddox, Robert D, 4 W 7th St, Cincinnati
McCampbell, E F, Sec, State Bd of Health, 322 E State St, Columbus
Palmer, Dudley W, 4 W 7th St., Cincinnati
Reed, C A L, Union Central Bldg, Cincinnati
*Sloan, Harry G, 1021 Prospect Ave, Cleveland
*Surgeon, Columbus Barracks

OKLAHOMA

Clark, Fred, Chairman, El Reno
Hume, Charles Robinson, Pres, Anadarko
Thompson, Claude A, Sec, Barnes Bldg, Muskogee
Berry, W D, Equity Bldg, Muskogee
Blech, A L, State Nat Bk Bldg, Oklahoma
*Boland Rex A, 1524 W 29th St, Oklahoma
Buxton, L Haynes, Indiana Bldg, Oklahoma
Dicken, William E, State Nat. Bk Bldg, Oklahoma
Duke, J W, Sec., State Bd of Health, Patterson Bldg, Guthrie
Reed, Horace, State Nat Bk Bldg, Oklahoma
Smith, Ralph W, Sec, State Licensing Board, Daniel Bldg, Tulsa
*Surgeon, Fort Sill

OREGON

MacKenzie, K. A J, Chairman, Corbett Bldg, Portland
Yenny, Robert Clark, Pres, Medical Bldg, Portland
McCusker, Clarence J, Sec, Corbett Bldg, *Portland*
Bowden, F E, Pendleton
Coffey, Robert C, Stevens Bldg, Portland
Hamilton, L H, Sec, State Licensing Board, Medical Bldg, Portland
Jefferds, H C, Stevens Bldg, Portland
Kuykendall, William, Eugene
Marcellus, M B, Selling Bldg, Portland
Roberg, David, State Health Officer, Selling Bldg, Portland
Wright, Sherman E, Medical Bldg, *Portland*

PENNSYLVANIA

Baldy, John M, Chairman, 2219 De Lancey St, Philadelphia
Codman, C A. E, Pres, Spruce and 42d Sts, Philadelphia
Stevens, C L, Sec, Athens
*Boyce, John W, Empire Bldg, Pittsburgh
Buchanan, J J, 1409 N Highland Ave., Pittsburgh
Davis, Edward P, 250 S 21st St., Philadelphia
Dixon, Samuel G, Sec, State Bd of Exam, Academy of Natural Sciences, Philadelphia
Edwards, J F, Health Department, Pittsburgh
Erd, J D, Philadelphia
*Franklin, C P, 121 S 16th St, Philadelphia
Frazier, Charles, 1724 Spruce St, Philadelphia
Gans, E, Pittsburgh
Gibbon, John H, 1608 Spruce St, Philadelphia
Harte, Richard, 1503 Spruce St, Philadelphia
Heckel, Edward B, Jenkins Bldg, Pittsburgh
Jopson, John H, 1824 Pine St., Philadelphia
Jump, Henry D, 4334 Chester Ave Philadelphia
Kirk, Edward C, 938 N 10th St, Philadelphia
LeConte, Robert G, 1530 Locust St, Philadelphia
Litchfield, Lawrence, 5431 Stt Ave, Pittsburgh
Martin, Edward, 1506 Locust St., Philadelphia
McAllister, J B, 234 N 3d St Harrisburg
McLean, *John D*, 1538 S Broad St., Philadelphia
*Pilling, G P, 4044 Chestnut St, Philadelphia
*Royer, Benjamin F, Donaldson Apartments, Harrisburg
de Schweinitz, George, 1705 Walnut St, *Philadelphia*
Simpson, F F, Jenkins Bldg, Pittsburgh
*Siter, E H, 1818 S Rittenhouse Sq, Philadelphia
Van Lennep, W B, 1421 Spruce St, Philadelphia
*Wainwright, J Mayhew, *516 Spruce* St, *Scranton*

RHODE ISLAND

*Keefe, John W, Chairman, *263* Blackstone Blvd, *Providence*
Chesebro, Edmund D, Pres, 2 Hawthorne St., Providence
Leech, James W, Sec, 111 Broad St, Providence
Day, Frank L, 72 Waterman St, Providence
*Easton, Charles D, 36 Ayrault St, Newport
Hammond, Roland, 266 Benefit St, Providence
Hussey, Fred V, 147 Angell St, Providence
Jones, Arthur T, 214 Benefit St, Providence
*Keefe, John W, 262 Blackstone Blvd, Providence
Perkins, Jay, 125 Waterman St, Providence
Stewart, Charles W, 2 Kay St, Newport
Swarto, Gardner T, State Health Officer, Sec., State Bd of Health, 70 Waterman St, Providence
*Wheaton, James L, 210 Main St., Pawtucket

SOUTH CAROLINA

Cathcart, Robert S, Chairman, 55 Hassell St, *Charleston*
Earle, Curran B, Pres, Southeastern Life Bldg, Greenville
Hines, Edgar A, Sec, Seneca
Boozer, A Earle, Sec, State Licensing Bd, 1806 Hampton Ave, Columbia
*Coward, Francis A., *State Bd of* Health, Columbia
Fennell, W W, Rock Hill
Gibbes, Hayward, 1508 Sumter St, *Columbia*
Guerry, LeGrande, 1300 Blanding St., Columbia
Hayne, James A., State Health Officer, Columbia
Kollock, Charles W, 86 Wentworth St., Charleston
McLeod, T H, (Gov), Florence
Mullally, Lane, 126 Meeting St, Charleston
Rutledge, Ed, 122 Meeting *St*, *Charleston*
*Surgeon, Department Headquarters, Charleston
Ward, J LaBruce, 1417 Hampton Ave, Columbia
Wood, J A., Sumter

SOUTH DAKOTA

Spafford, F A., Chairman, Flandreau
Grain, F M., Pres, Redfield
Alway, Robert D, Sec, 202 S Main St., Aberdeen
Bobb, Byron A, Mitchell
*Clark, William E, Lt, U S Army, 5119 7th Ave, Aberdeen
Freeman, John W, Lead
Giere, E O, Watertown
Jackson, F J, Rapid City
Jenkins, Park B State Health Officer, Sec., State Board of Health, Waubay
*Surgeon, Ft. Meade

TENNESSEE

Haggard, William D, Chairman, 184 8th Ave N, Nashville
Cowden, C N, Pres, Hitchcock Bldg, Nashville
West, Olin, Sec, First Nat Bk Bldg, Nashville
*Burch, Lucius E, Eve Building, Nashville
DeLoach, Alfred B, Sec., State Licensing Board, Scimitar Bldg, Memphis
Ellett, E C, Exchange Bldg, Memphis
Ellis, G M, 211 E 8th St, Chattanooga
Fort, Rufus E, 209 7th Ave N, Nashville
Jones, Frank, Exchange Bldg, *Memphis*
Malone, W Battle, Exchange Bldg, Memphis
Miler, S R, 406 W Church St, Knoxville
Moore, Moore, Bank of Commerce and Trust Bldg, Memphis
Shoulders, H H, State Health Officer, State Capitol, Nashville
*Smithe, Frank D, 554 East St, Memphis

TEXAS

Russ, Witten B, Chairman, Hicks Bldg, San Antonio
Inge, James M, Denton
Cary, E H, Pres, Southwestern Life Bldg, Dallas
Taylor, Holman, Sec, Texas State Bk Bldg Ft Worth
Beall, Frank C, 109 E 7th St, Ft Worth
*Beverley, Albert F, U S Army, 311 W 15th St, Austin
Burgess, John L, Peerless Bldg, Waco
Burns, John J, Cuero
Collins, W B, Pres, State Bd of Health, Austin
*Commanding Officer Base Hospital, Ft Sam Houston, San Antonio
*Commanding Officer Base Hospital, Ft Bliss
Doolittle, H M, Wilson Bldg, Dallas
Foster, John H., Kress Bldg, Houston
Loomis, Edgar W, City Hall, Dallas
McElhannon, M P, Sec, State Licensing Bd, Belton
*Surgeon, Ft Crockett
Thompson, James E, Amer Nat. Insurance Co Bldg, Galveston

UTAH

Baldwin, Samuel C, Chairman, Templeton Bldg, Salt Lake City
Whitney, E W, Pres, 1201 1st Ave, Salt Lake City
Ewing, W B, Sec, Boston Bldg, Salt Lake City
Harding, George F, Sec, State Bd of Exam, Templeton Bldg, Salt Lake City
Hosmer, A J, Judge Bldg, Salt Lake City
Joyce Robert S, First Nat. Bk Bldg, Ogden
Richards, R. T, Walker Bk Bldg, Salt Lake City
*Surgeon, *Ft Douglas*, Salt Lake City
Stauffer, Frederick, Sec, State Bd of Health Templeton Bldg, Salt Lake City

VERMONT

Townsend, W W, Chairman, Rutland
Beecher, C H, *Pres*, 42 N Winooski Ave, Burlington
Ricker, William Gray, Sec, St Johnsbury
Allen, J M, St. Johnsbury
Allen, Lyman, 288 Main St, Burlington
Anderson, George B, *Brattleboro*
Dalton, Charles F Sec., State Bd of Health, 184 Church St, Burlington
Hamilton, J M, St. Johnsbury
Hazelton, W P, Bellows Falls
Stickney, William, 11½ Center St, Rutland
*Surgeon, Ft Ethan Allen
Wheeler, John B, 210 Pearl St., Burlington
Nay, W Scott, Sec., State Bd of Med Registration, Underhill

VIRGINIA

*McGuire, Stuart, Chairman, 513 E Grace St., Richmond
Stover, George A, *Pres*, South Boston
Irving, P A, Sec., Farmville
Barney, J N, Sec, State Bd of Exam, Fredericksburg
Bosher, L C, 422 E Franklin St., Richmond
Bowen, Samuel C., 316 E Franklin St. Richmond
Bryan, Root. C, 301 W Grace St, Richmond
Cook, G B, 200 W Grace St, Richmond
Gwathmey, Lomax, *220 Freeman* St., Norfolk
Horsley, J S, St. Elizabeth's Hospital, Richmond
Leigh, Southgate, *109 College Place* Norfolk
Phelps, Wilbur M Staunton Military Academy, Staunton
Vanderslice, G K Phoebus
Vanderhoff, *603* E Grace St, Richmond
Williams, Ennion, Sec State Bd of Health, 1110 Capitol St, Richmond

WASHINGTON

Wheeler, Ernest C, *Chairman*, Fidelity Bldg, Tacoma
Semple, John M, Pres, Mohawk Bldg, Spokane
Thompson, Curtis Harrod, Sec., Walker Bldg, Seattle
Brown, Ira A, 901 7th Ave, Seattle
Eagleson, James B, 920 Boren Ave, Seattle
Horton, G M, Cobb Bldg, Seattle
Johnston, W R, Paulsen Bldg, Spokane
Lamson, O F, Alaska Bldg, Seattle
Raymond, Alfred, Lowman Bldg, Seattle
Souther, C N, Sec., State Licensing Bd, Baker Bldg, Walla Walla
*Surgeon, Vancouver Barracks
*Surgeon, Fort George Wright, Spokane
Tuttle Thomas D, Sec., State Bd of Exam, Henry Bldg, Seattle
Yocum, James R, Nat. Realty *Bldg*, Tacoma

WISCONSIN

Evans, E, Chairman, State Bank Bldg, LaCrosse
Jermain, L F, Majestic Bldg, Milwaukee
Sleyster, Rock, Sec, Waupan
**Brown, G V I, Colby Abbott* Bldg, Milwaukee
*Barrett, E J, Sheboygan
Connell, F G, State and Washington Sts, Oshkosh
Dodd, James M, Sec., State Bd of Exam, Ashland
Harper, C A, Sec, State Bd of Health, Madison
Jackson R. H, *119 N Hamilton St Madison*
McDill John R., 628 Astor St, Milwaukee
Sarles, W T, Sparta
Yates, J L, 141 Wisconsin St, Milwaukee

WEST VIRGINIA

*Cannaday, John E, Chairman, Capitol and Virginia Sts, Charleston
Butt A P, Pres, Davis
Anderson, J H, Sec, Marytown
Golden W W, Elkins
Hatfield, H D, Welch
Hoffman, C S, Keyser
Hupp, Frank L, 61 14th St Wheeling
Jepson, S L, Com of Health State House, Charleston
Rader, J E, Robson and Prichard Bldg Huntington
St Clair, W H Bluefield Sanitarium, Bluefield

WYOMING

Phifer, F W, Chairman, Wheatland
Hale, R W, Pres, Thermopolis
Beard, C Y, Sec, State Bd of Health Carey *Block, Cheyenne*
Cantril, A R, Douglas
Harris, Herbert T Basin
McCollum, H E, Sec, State Bd of Med Exam, Laramie
Robert, W H, Sec., Sheridan
Strader, George L, First Nat. Bk Bldg, *Cheyenne*
*Surgeon, Fort D A Russell Cheyenne

HAWAII

Judd, James R, 163 S Beretania St, Honolulu
Pitman, Frank L., Lihue
Hobdy, W C, 1123 Alaska St., Honolulu
Moore, W L, Sec, Bd of Exam, Boston Bldg, Honolulu

PORTO RICO

Aviles, Berrero Jacinto, 10½ Franca St., San Juan
Glines, Walter A., 45 Allen St San Juan
Lippitt, W F, 50 Calle de la Cruz San Juan
Dutcher, Colonel, San Juan

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities, new hospitals, education public health etc.)

ALABAMA

Power Company Surgeons Organize—At a meeting of the surgeons of the Alabama Power Company in Birmingham, April 16, Dr Samuel R Benedict, Birmingham, was elected president, Dr Benjamin B Simms, Talladega, vice president, and Dr James P Colvin Lincoln secretary-treasurer The name of the new organization is the Association of Surgeons of the Alabama Power Company

State Association Elects New Officers—At the annual meeting of the Medical Association of the State of Alabama, held in Montgomery, April 17-20 under the presidency of Dr Henry Green, Dothan, Birmingham was selected as the next place of meeting, and the following officers were elected president, Dr William D Partlow Tuscaloosa, vice president Dr William F Betts, Evergreen, censors, Drs William H Sanders, Montgomery, and Benjamin L. Wyman Birmingham and councilors Drs Ross C. Speir, Furman, Norman G James, Hayneville, Henry B Disharoon Roanoke, James C Martin Cullman, and Frank L. Chenault, Albany Dr Samuel W Welch, Talladega, was elected state health officer succeeding Dr William H Sanders, and Dr William W Dinsmore was elected state prison inspector The Jerome Cochran lecture was delivered by Dr William J Mayo, Rochester, Minn., on "The Importance of Septic Infection in the Three Great Plagues"

ARIZONA

New Officers—The Arizona Medical Association held its twenty-sixth annual meeting in Douglas April 17 and 18, under the presidency of Dr Robert Ferguson, Bisbee The following officers were elected president, Dr William A. Holt Globe, vice presidents, Drs William W Watkins, Phoenix, Turner B Smith Morenci and Charles S Vivian, Humboldt, secretary, Dr Clarence E. Yount, Prescott (reelected), treasurer, Dr Roderick D Kennedy, Globe, and delegate to the American Medical Association, Dr Joel I. Butler, Tucson.

CALIFORNIA

Personal.—Lieuts Sylvan L. Haas San Francisco, and Philip M Thomas, Sacramento, M O R C. have been placed on the active list, and ordered to duty at the Letterman General Hospital, San Francisco

FLORIDA

Porter Resigns—May 16, Dr Joseph Y Porter, state health officer since 1889 resigned to enter the military service Dr Joseph E Taylor, Live Oak, has been appointed Dr Porter's successor

State Association Meeting—The annual meeting of the Florida Medical Association was held at Atlantic Beach, May 18 and 19, under the presidency of Dr Edmund W Warren Palatka Tampa was selected as the next place of meeting and the following officers were elected president, Dr Ralph N Greene, Jacksonville, vice presidents, Drs Henry C Dozier, Ocala, D A. McKinnon, Marianna and Henry Hanson Jacksonville, and secretary-treasurer and editor of the medical journal, Dr Graham E. Henson Jacksonville.

ILLINOIS

Physician Brings Suit.—Dr Hart F Litchfield Quincy is reported to have brought suit against the Central Business Men's Association for failure to pay a claim for disability

Sanatorium Contract Let.—The Peoria Tuberculosis Council at its meeting, May 12 awarded contracts for the construction of the sanatorium to be erected on the site recently purchased for $10 000 The buildings will cost about $49,000

County Secretaries Elect Officers—At the annual meeting of the Illinois County Secretaries Association at Bloomington, May 8 Dr Flint Bondurant, Cairo was elected president Dr Thomas D Doan Scottville, vice president and Dr Fernando C. Gale, Pekin, secretary

Service at Home—Lieut-Col Jacob Frank, surgeon-general of Illinois, has worked out a thorough and comprehensive plan, whereby physicians, dentists, druggists, nurses and hospitals will cooperate in furnishing free service to the needy families of men from Chicago who have entered the military service The plan contemplates the division of the city into districts in each of which physicians, who on account of age or for other reasons are disqualified for active service in the field, may render service.

Chicago

Landis Speaks Before Physicians—At the meeting of the Physicians' Club of Chicago, May 24, Judge Kenesaw M Landis urged every citizen to stand squarely behind the nation in this crisis

Internal Medicine Society—The Chicago Society of Internal Medicine held its eighteenth annual meeting in the Northwestern University building May 28 Papers were read by Drs Peter Bassoe Charles Spencer Williamson, F M Smith, James B Herrick and Walter W Hamburger

New Medical School—The Rockefeller Foundation and General Education Board announced May 25, that the University of Chicago by raising $3 461 500, had secured the $2,000,000 fund offered by the foundation, toward building a medical school in Chicago, and which was contingent on the securing of this amount

Slain Nurses Honored—A committee has been appointed to provide bronze memorial tablets to be placed in the Illinois Training School for Nurses and in the Evanston Hospital in memory of Miss Helen Burnett Wood and Mrs Edith Ayres nurses who were killed by a shell explosion while en route to France The body of Miss Wood was brought to Evanston and buried with military honors, May 23

Personal—Dr Sadie B Adair has been named as a trustee of the board of education——Dr Otto T Freer spoke at the monthly meeting of the Portland (Ore) Academy of Medicine May 10 on "Acute Rhinitis"——Dr Henry W Abelmann sustained painful injuries, May 7, in a collision between his car and another automobile——Dr Charles Louis Mix delivered an address on heart disease before the Shawnee County (Kan) Medical Association at Topeka, May 4

INDIANA

Societies Unite—At a meeting of the Delaware County Medical Society May 4 it was decided to unite with the Blackford County Medical Society, the joint body to be known as the Delaware-Blackford Medical Society

District Society Meetings—At the thirteenth annual meeting of the Fourth District Medical Society, held at Greensburg, May 22, North Vernon was selected as the next place of meeting and the following officers were elected president, Dr Elmer U Wood, Columbus, vice president, Dr Edward J Libbert, Aurora, secretary, Dr John H Green North Vernon, and treasurer Dr Dennis L McAuliffe, North Vernon——The annual meeting of the Ninth District Medical Society was held in Noblesville, May 18 and the following officers were elected president, Dr Fred A Dennis, Crawfordsville vice presidents, Drs Omer D Hutto Kokomo and Alvin R. Kerr Attica, and secretary-treasurer Dr Herman A Beck, Lebanon Tipton was selected as the next place of meeting

Personal.—The following officers of the Medical Officers Reserve Corps have been placed on active duty and ordered to duty at the training camp at Fort Benjamin Harrison Lieuts Roy B Storms James M Smith Lehman M Dunning Claude Du Vall Holmes and Arthur F Weyerbacher, all of Indianapolis——Dr Paul F Martin Indianapolis has returned after several months service in military hospitals in Bohemia and Austria——Dr Charles P Emerson, Indianapolis dean of the Indiana Medical School has been appointed a member of the State Council of Defense.——Dr C Herbert Bruner Greenfield has resigned as lieutenant, M C, Ind. N G, to take up the practice of his father the late Dr C K. Bruner——First Lieut. Perry C. Traver M C, U S R., South Bend, has been assigned to active duty at the Notre Dame University Notre Dame, Ind., for the examination of applicants for admission to the citizens' training camps On completion of this duty he will be relieved from further active duty

MARYLAND

Meetings—A joint meeting of the Carroll Howard and Baltimore County medical societies was held at the Springfield State Hospital, Sykesville, May 24 There were two sessions, one at 10 30 a m, and the other in the afternoon

Doctors Subscribe to Liberty Loan—At a meeting of the medical profession held at Osler Hall, Baltimore, May 23, $142,800 was subscribed for Liberty Loan Bonds Dr William S Baer was the presiding officer Subscriptions of from $50 to $10,000 were received One hundred and twenty physicians and surgeons attended the meeting

Seventy Thousand Dollars to School of Hygiene and Public Health—The School of Hygiene and Public Health of the Johns Hopkins University has been given $70,000 for maintenance by the Rockefeller Foundation The appropriation will be for the school's fiscal year, beginning July 1 The establishment of the department of hygiene and public health at Hopkins has been made entirely with money given by the Rockefeller Foundation, which to date has given about $167,000 for buildings and equipment It is expected that the school will be open in October next. Dr William H Welch will be the director, and with Dr William H Howell, professor of physiology, has been in charge of the work of organization

Gift to Johns Hopkins—Dr Frank J Goodnow, president of Johns Hopkins University, has just announced that the Johns Hopkins Medical School has received a gift of $350,000 from the General Educational Board in New York. The money is to be divided between the laboratory department which is to receive $250,000, and the department of pediatrics, which receives the remaining $100,000 This last named amount is to be used for the support of the Harriet Lane Home for Children, which has been enlarged and improved at considerable cost Dr John Howland is in charge of this department of the hospital The departments of pathology and physical chemistry and several minor branches of the laboratory department will divide the $250,000 During the past two years the General Board of Education has contributed about $1,450,000 for full time medical teaching, which makes the gifts of this board to Johns Hopkins University total about $1,750,000

Increase of Tuberculosis in Baltimore—Eighty-one cases of tuberculosis, thirty-five of which were fatal, were reported to the health department during the past week Health Commissioner John D Blake stated that the disease was on the increase in the city, largely because the department is not properly equipped to handle it More cases now come to the attention of the department because it is stringently enforcing the law requiring physicians to report infectious diseases, and also because the nurses in the tuberculosis division are doing more effective work in finding and having persons suffering with tuberculosis treated The disease is being spread by the negro population, as inadequate provision is made for the treatment of this class There are a few beds at Bay View Hospital, but the number is insufficient to meet the demands As a result, those having the disease take care of themselves in their homes and even go out as laundresses and servants The housing committee appointed recently by the mayor which is working out plans for better sanitary living conditions among negroes and white families in congested neighborhoods is expected to develop an effective agency in antituberculosis work

For Care of the Crippled Soldiers—Preparing for the work ahead when American troops take their places on the firing line in Europe, a group of local scientists and practical workers are planning to take care of the crippled soldiers who will return to this country The plan is to reeducate the men and make them more or less self-supporting Dr John Broadus Watson, head of the psychologic department of the Johns Hopkins University, has been chosen by the American Psychological Association to work out the plan The community workshop group is preparing to assist in this work The Maryland Woman's War Relief Hospital will take care of the convalescent soldiers who need special care Dr Anna D S Abercrombie is the president of this organization The Maryland Psychiatric Base Hospital is preparing to take charge of the soldiers who may become nervous wrecks as a result of the war The Maryland Association for the Prevention and Relief of Tuberculosis will take charge of those who may contract that disease and take steps to prevent its spread Those who are blinded or have their eyesight impaired will be looked after by the Maryland Workshop for the Blind In addition several Red Cross groups are especially interested in this work

Personal—Dr Winford H Smith, superintendent of Johns Hopkins Hospital, has been appointed major in the United State Medical Corps, with orders to report for active duty at the office of Surgeon-General Gorgas, at the War Department in Washington, D C ' Although he will spend most of his time in Washington, Dr Smith will continue to live at the hospital and keep in close touch with the administration During Dr Smith's absence, Dr Ralph B Seem will act as superintendent of the hospital——Dr William S Thayer, Baltimore, is one of the 1908 Harvard graduates who have set out to raise a fund of $100,000, in order that the University's Reserve Officers' Training Corps may be equipped and maintained at a grade equal to that of a federal camp——Dr Howard A Kelly has announced that through the generosity of Alfred I Du Pont, Wilmington, Del, a considerable quantity of radium has been given to the Howard A Kelly Hospital in Baltimore——Dr John D Blake, health commissioner, has appointed Dr William G Clopton and Charles Norton as health wardens, to substitute for Major Frederick H Vinup and Capt Edmund A. Munoz, who have been called out as officers in the Fifth Maryland Regiment.——Dr William George MacCallum of Columbia University has accepted the post as head of the department of pathology at the Johns Hopkins University, to succeed Dr William H Welch, who has given up this work to accept the direction of the School of Hygiene and Public Health Dr McCallum will begin his work in Baltimore in the fall

MASSACHUSETTS

A Correction Workmen's Compensation in Massachusetts—In The Journal, May 12, appeared the statement that the workmen's compensation act of Massachusetts, which the governor had allowed to become a law without his signature, permitted injured workmen "in certain institutions under the provision of the workmen's compensation act to select their own physician for treatment" Dr Arthur N Broughton, chairman of the Committee on Workmen's Compensation Act of the Massachusetts Medical and Homeopathic Medical Society, states that the law gives free choice of physicians on the part of the workmen throughout the state, the only restriction being that the work of the physician, whether as the choice of the workman or as representing an insurance company, must be adequate

NEW HAMPSHIRE

Bancroft Resigns—Dr Charles P Bancroft who succeeded his father as superintendent of the New Hampshire State Hospital, Concord, in 1882, has resigned, to take effect July 1

New State Officers—The one hundred and twenty-sixth annual meeting of the New Hampshire Medical Society was held in Concord, May 16, under the presidency of Dr Emdon Fritz, Manchester, and the following officers were elected president, Dr Fred S Towle, Portsmouth, vice president, Dr Charles P Bancroft, Concord, secretary, Dr D E Sullivan, Concord (reelected), treasurer, Dr David M Currier, Newport, trustees, Drs John M Gile, Hanover, Herbert I Smith, Nashua, and Charles R Walker, Concord, and councilors, Drs Charles S Walker, Keene, Emery M Fitch, Claremont, Robert J Graves, Concord, Frank E Kittredge, Nashua, Abram W Mitchell, Epping, Forrest L Keav, Rochester, Richard E. Wilder, Whitefield, Fred E Clow, Wolfeboro, Alpha H Harriman, Laconia, and Frederick von Tobel, Lebanon

TENNESSEE

Personal—Capt Eugene R Hochstetter, Jr, and Lieut Douglas L McPheeters, M O R C, both of Chattanooga, have been placed on the active list, and directed to report for duty to the commanding officer at Fort Oglethorpe, Ga

New Anatomical Building—The cornerstone has just been laid for the new Anderson anatomical hall of Meharry Medical College, on ground opposite the George W Hubbard Hospital The building will cost $10,000, which represents what is probably the largest gift ever made by a representative of the colored race

WYOMING

New State Officers—At the annual meeting of the Wyoming State Medical Society, held in Douglas, recently, the following officers were elected president, Dr Robert W Hale Thermopolis, vice presidents, Drs Homer R Lathrop, Casper, Anna G Hurd, Sheridan, and Bertha N Hamilton, Greybull, secretary, Dr Jesse D Lewellen, Powell, treasurer and delegate to the American Medical Association, Dr George P Johnston Cheyenne

CANADA

Death of Major Jones—Major H Jones of Hamilton, Ont, in charge of the Fifth Canadian Field Ambulance, has succumbed to pneumonia, overseas, aged 46

Death of Lieutenant-Colonel Hewetson — The British exchanges give extensive notices of the death of Samuel W Hewetson, lieutenant-colonel of the Canadian Army Medical Corps aged 45 He died at London after an operation for perforative colitis Some time ago it was reported that he was suffering from nervous breakdown and shell shock. He was born in Ontario and studied at McGill University Soon after his graduation tuberculosis showed itself and he became a patient under Trudeau at Saranac, remaining to be one of his assistants He settled later at Pincher Creek, Alta, and later moved to Calgary At the beginning of the war he was appointed A D M S of the Alberta district, and organized the Eighth Canadian Field Ambulance of which he was placed in command, proceeding overseas early in 1916

GENERAL

College of Physicians to Meet.—The second convocation of the American College of Physicians will be held in the Hotel Nassau, Long Beach, Long Island, N Y, June 5

Musgrave Leaves Manila.—Dr William E. Musgrave, Manila has been appointed superintendent of the Children s Hospital in San Francisco, and has assumed the duties of his new position.

Pediatrists to Meet.—The American Association of Pediatrists will hold its eleventh annual meeting in New York June 3, under the presidency of Dr Lawrence R DeBuys New Orleans

Gynecologists Meet.—The American Gynecological Society held its forty-second annual meeting at Pittsburgh May 31 and June 1 and 2, under the presidency of Dr Frank F Simpson, Pittsburgh

Anesthetists Meet.—The fifth annual meeting of the American Association of Anesthetists was held in the Hotel McAlpin, June 2, under the presidency of Dr Walter M Boothby Boston

Radium Society to Meet.—The second annual meeting of the American Radium Society will be held at the Hotel Vanderbilt, New York, June 4 under the presidency of Dr William H. B Aikens Toronto The scientific session will be preceded by a clinic at the New York Sanitarium and succeeded by a dinner at the Vanderbilt.

Students of Epilepsy Meet.—The sixteenth annual meeting of the National Association for the study of epilepsy was held at the New Jersey State Village for Epileptics Skillman May 28 and 29, under the presidency of Dr David F Weeks Skillman

Bequests and Donations—The following bequests and donations have recently been announced

St. Mary s Free Hospital for Children New York $2 000 by the will of Mrs Laura Frances Hoppack Hearn

Dr George S Isham Chicago and his three children the bulk of the estate of Mrs Katharine Porter Isham estimated at $1 000 000

Academy of Medicine to Meet.—The forty-second annual meeting of the American Academy of Medicine will be held in New York June 4 and 5 under the presidency of Dr Jacob E. Tuckerman, Cleveland Their topic for discussion is to be "Civilization in Its Effects on Morbidity and Mortality'

Dermatologists Elect Officers—At the annual meeting of the American Dermatologists Association held in Cincinnati May 24 to 26 Dr Abner Post Boston, was elected president and Dr Oliver S Ormsby, Chicago was reelected secretary-treasurer Philadelphia was selected as the next place of meeting

Tristate Hospital for Cripples—The 'Circle of Good Deeds of Kings Daughters of Memphis' has undertaken the establishment of a tristate hospital school in Memphis for the crippled children of Arkansas, Mississippi and Tennessee The initial capacity of the hospital will be forty beds and the purpose of the institution is to develop the minds of the children while their bodies are receiving the care of an orthopedic surgeon

Cotton-Belt Surgeons.—At the annual meeting of the Cotton-Belt Railway Surgeons' Association, held at the hospital of the company in Texarkana Texas which was presided over by Dr John L. Jelks, Memphis Tenn the following officers were elected president, Dr Edward H Cary, Dallas, Texas, vice presidents, Drs Fred T Murphy, Brinkley, Ark, Herschel F Connally, Waco, Texas, John L Jelks, Memphis, Tenn, and Thomas P Lloyd Shreveport, La, and secretary-treasurer, Dr William Hibbitts, Texarkana, Texas

Medical Milk Commission Meets—The American Association of Medical Milk Commissions holds its eleventh annual meeting at Brooklyn June 1-2 and 4, under the presidency of Dr Walter D Ludlum Brooklyn The National Certified Milk Contest will be conducted, for which three silver cups will be awarded, one by the association one by the Certified Milk Producers of America and one by the Standard Cap and Seal Company On the afternoon of June 2 a memorial service, to Dr Henry L Coit the father of certified milk, was held at Mr Francisco's Homestead, Fairfield, N J

National Tuberculosis Association Adopts Resolutions—At the annual meeting of the National Association for the Study and Prevention of Tuberculosis, held in Cincinnati May 10 resolutions were adopted offering the American Red Cross the services of the association in promoting Red Cross work, urging all public health nurses, and especially those with special training in tuberculosis, to continue to devote their energies to the local health problems, favoring national prohibition, both for soldiers and civilians, during the war period and for one year thereafter, condemning the action of the United States Department of Commerce in urging on the 'patent medicine" interests of the country that they exploit China and the Chinese people as a lucrative field for business, and urging the registration and organization for the term of war of the tuberculosis workers of the country

Conference of Charities and Correction—At the forty-fourth annual meeting of the National Conference of Charities and Corrections at Pittsburgh June 6-13, the social problems of the war will receive special attention Mr Herbert C Hoover chairman of the board of the National Council of Defense and of the American Council for Relief in Belgium will deliver an address On June 8, the relief of soldiers' families will be discussed Economy of food and the maintenance of standards of living will be presented Dr Warren H Wilson, New York, an authority on rural life problems, has prepared a program on mobilizing of rural communities The demands of public health during the war will be voiced by a committee under the chairmanship of Dr Charles E A Winslow of Yale University Mobilization of the brain power of the nation will be the subject of an address by Dr Stewart Paton of Princeton University Food and drug control will be discussed by Dr Carl L Alsberg of the United States Department of Agriculture.

Malaria Eradication—Dr Frederick L. Hoffman statistician of The Prudential Insurance Company of America has just completed an extended trip through Louisiana in the private car of the state board of health, with Dr Oscar Dowling the president of the board, Dr William H Seemann president of the Louisiana State Medical Society, and Dr Henry R Carter, senior surgeon of the United States Public Health Service, in the furtherance of the state-wide campaign for malaria eradication improved accuracy and completeness in birth and death registration, and public health matters generally The principal stops made were New Orleans New Iberia Lake Charles, De Ridder Shreveport, Monroe, Tallulah, Baton Rouge and Alexandria. About twenty public meetings were held, including medical societies, high schools churches etc A special effort was made to reach the negro population, in view of the fact that the death rate among that element of the Louisiana population from all causes as well as from malaria is decidedly excessive It is anticipated that as the result of the state-wide education material progress will be made in the direction of malaria eradication and the required improvement in the accuracy and completeness of vital statistics so as to qualify at least a number of parishes for admission to the United States Registration Area Sanitary surveys were made of a number of important sections and it is quite probable that the results of the trip and matters and data pertinent thereto will be presented in the form of an address on the occasion of the forthcoming meeting of the American Public Health Association in New Orleans

Aid for Soldiers' Families—The Hennepin County (Minn) Medical Society has named a medical war board to work out a plan for giving free medical aid to the families of all men in government war service.——The physicians of Covington Ky., have agreed to care for and protect the practices of all physicians who enter the military service——The Medical Society of Wyoming County, N Y, has agreed that members called to attend cases in the practice of physicians who are in military service shall turn over one third of the fees collected to the physician or to his family——Madison County (Ind) Medical Society has adopted a resolution to turn over one third of the gross collections realized from the practices of the physicians called to the colors, to the physicians or dependents of these physicians——Members of the Knox County (Tenn) Medical Society have agreed to turn over one third of fees collected from patients, from physicians who volunteer for service in the army, to these physicians or their dependents Similar action has been taken by the physicians of Chattanooga, Tenn——The Monterey (Calif) Medical Society has agreed to treat during the period of the war free of charge the dependents of men who are in the military service——Members of the King County (Wash) Medical Society have offered to perform free of charge all minor operations required to qualify otherwise ineligible applicants for military service, the hospital charges being paid by the patients——Westchester County (N Y) Medical Society has adopted a resolution, stating that all physicians who remain at home consider it their patriotic duty and privilege to do their utmost to conserve the professional interests of their professional brethren in the military service.

FOREIGN

Physician Appointed Minister of Public Instruction in Spain—J E Rodriguez, a physician of Madrid, and collaborator on the *Siglo Medico*, has been made minister of public instruction in the recent reorganization of the Spanish cabinet.

Statue of Berthelot—A statue of Berthelot, the great organic chemist and founder of thermochemistry, the study of the action of heat on chemicals, was unveiled last month in the gardens of the College de France, Paris, where he did much of his pioneer work. He was born in 1827

Antimalaria Mission to Macedonia—The French military and public health authorities are organizing a special antimalaria unit to send to the Macedonia district, consisting of twenty physicians, 300 soldiers and their officers, eighteen automobile drivers and other personnel The mission is to be in charge of Dr Visbecq Thirty tons of quinin is to be a part of its equipment

Deaths in the Profession Abroad—Lieut-Col **D B Chiles Evans**, Swansea, R A M C, with No 18 British Field Ambulance, aged 39——Col **J H E Austin**, qualified in 1887, died at military hospital in London——**Sir A. Ruffer**, president of the Egyptian Sanitary and Quarantine Council, one of the principal authorities on all matters relating to public health in Egypt He was at first director of the institution at London which later became the Lister Institute, and published much on bacteriology and pathology, leaving in 1896 be professor of bacteriology at the Cairo Medical School was the representative of Egypt at the sanitary conerences, and was a member of the Indian plague commission His death is said to have occurred as he was returning from Saloniki, where he had been engaged in reorganizing the sanitary service of the provisional government of Greece——**T Salazar**, professor of therapeutics at the University of Lima, aged 87 On account of his unusually long incumbency of the chair of therapeutics he has seen the ebb and flow of more tides in medicine in the course of his instruction than falls to the lot of most professors——**A Corona**, professor of experimental physiology at the University of Parma, aged 65——**R del Castillo y Quartiellers** of Madrid, former senator, chief of the civil administration and the founder of the Instituto Medico Quirurgico Encarnacion

Recent Deaths in the Profession in England—**S D Rowland**, bacteriologist of the Lister Institute, London, but during the war Major Rowland and has been in charge of No 1 Mobile Laboratory His ingenuity in fitting up this laboratory made it the model for others subsequently sent out In 1915 he organized and carried out a house-to-house search for typhoid carriers in the civil population of the area of British operations It was while conducting a search for meningococcus carriers recently that he contracted cerebrospinal meningitis himself and succumbed, aged 45 In 1905 he was sent to Bombay to study means of prevention of bubonic plague and spent two years there His monographs published in the *Journal of Hygiene* on vaccination against different diseases are said to be the most thorough and quantitative researches in this domain of immunology——**M J Whitty**, lieutenant-colonel and chief medical recruiting officer for the Liverpool district, aged 54 He was of old Irish stock of which many generations had given brilliant men to the army——**L K H Hackman** of Portsmouth, England, medical officer in charge of the staff and departments and families of the Portsmouth garrison (England) He was also instructor of the police officers and constables in first aid duties——**C Stiebel**, killed in action, aged 40 He was a medical missionary of the Salvation Army in India for some years, having charge in turn of two of their hospitals Since the war began he has served in hospitals in England and in Mesopotamia——**R H Kinsey**, chairman of the ethical committee of the British Medical Association, member of the town council of Bedford, England, aged 77——**F P Lansdown**, a prominent surgeon of Bristol, aged 83 His father, himself and his son have served in turn as surgeon to the Bristol general hospital

LONDON LETTER

London, May 7, 1917

The War

THE FOOD PROBLEM

A vigorous campaign to promote economy in the use of food is being carried on so as to counteract, as far as possible, the destruction of food by the submarines Meetings are held all over the country at which the need for reduced consumption and the elimination of waste is enjoined Bread is the most important and the most difficult problem, for the situation is aggravated by a shortage of the world's yield of cereals A proclamation by the king has been read in the churches pointing out that abstention from all unnecessary consumption of grain is the most effectual means of defeating the enemy He exhorts all who have the means of procuring articles of food other than wheaten corn to practice the greatest economy and frugality in the use of every species of grain, and charges all heads of households to reduce the consumption of bread in their families by at least one fourth, to abstain from the use of flour in pastry, and to restrict, or wherever possible to abandon, its use in all other articles than bread He exhorts those who keep horses to abandon the practice of feeding them on oats or other grain It is interesting that an almost identical proclamation was issued by George III in the year 1800, the time of the Napoleonic wars An order is to be issued making the waste of any kind of food penal The threatened shortage of grain has brought about a reform which previous methods failed to do A few years ago an agitation was carried on in the press in favor of what was called "standard bread," that is, bread containing the wheat germ, which it was the practice to remove to satisfy the public craze for a white loaf, but it was not a great success Now the millers are compelled to extract a high percentage from the grain (as stated in previous letters), and therefore the dark looking loaf, which alone is available, is a much more nutritious food

This was pointed out by Captain Bathurst, parliamentary secretary to the ministry of food, at a meeting of the Royal Society of Arts He said that it was probable that the relative availability and economic use of bread here and in Germany would prove the determining factor of the war National necessity had forced on the public mind the important issue of what constituted bread properly so called, which reformers had so long preached to the unheeding and skeptical As long ago as 1882, Mr Stephen Terry pointed out that there were four coatings to the wheat berry, and that all except one, the bran, contained elements fit for human consumption and necessary for human efficiency We should be careful how we interfere with any of Nature's gifts and destroy her provision by reason of prejudice or from purely esthetic considerations, such as prevailed in the production of white bread War bread was almost a complete human food, and when combined with either butter or margarin formed a complete food This certainly was not true of the anemic loaf in use before the onset of war

INDUSTRIAL EFFICIENCY AND FATIGUE IN MUNITION WORKERS

The Health of Munition Workers Committee has issued an interim report on efficiency and fatigue Workers complain of "staleness," which is due almost solely to persistent long hours and deprivation of weekly rest. The committee thinks that proper attention earlier in the war to the need for weekly rest would have prevented a large part of the diminished capacity of this kind, and averted wasteful expenditure on imperfect work. For the avoidance of "staleness" in conditions of strenuous labor it is not enough to treat the workmen in the bulk and to regulate daily and weekly rests on an average, individual workmen must be considered In many cases a single day off at the right time would have avoided wasteful reduction of capacity In a sudden national emergency, the accumulation of fatigue and its results in workers might temporarily be disregarded, but now, though the special need persists, the race is to be a long one, and failure to conserve the maximum efficiency of the workers must be disadvantageous Attempts to stimulate them to feverish activity in the supposed interests of the country are likely to be as damaging to the desired result as the cheers of partisans would be if they encouraged a long-distance runner in futile sprinting early in his race.

Report of the Radium Institute

An important report of the Radium Institute for the two years ending last December has just been issued The policy of refusing to treat operable malignant disease, except rodent ulcer, and cases in which the patient positively declines operation, has been followed In epitheliomas of the buccal, laryngeal and pharyngeal mucous membranes, temporary improvement was frequently obtained, but the final result was disappointing Of fifty-eight such patients treated to a conclusion, sixteen were dead at the time of the report thirteen were not improved, twenty-five were improved and four were apparently cured In addition, thirty patients abandoned treatment, and fourteen were examined but not treated In some rare instances, isolated nodules in the tongue responded well to burying in them a tiny powerful emanation tube of 50 mg or more initial activity screened with 1 mm of silver or 3 mm of platinum for a period of from eighteen to twenty-four hours Brisk reaction, fibrous changes in the nodule, and arrest of the diseases followed Under this method, small circumscribed growths in the soft palate did well, and of all epitheliomatous lesions in the mouth or fauces, these are regarded as the most suitable for radium therapy Of six patients with vaginal epithelioma, four were apparently cured, one was improved, and one was not improved. Primary epithelioma of this region usually reacted well to prolonged exposures with powerful applicators heavily screened, and if of recent origin and without such surrounding induration, were often completely removed In inoperable carcinoma of the uterus striking symptomatic improvement was almost invariable—arrest of hemorrhage, diminution of discharge, healing of ulceration, reduction of infiltration diminution of rate of growth, and amelioration of pain Some cases previously declared to be inoperable became operable.

The treatment was repeated at intervals of six weeks or two months A 50 or 100 mg tube, screened with 2 mm of lead and three mm of rubber, *is introduced* into the cervical canal, or if this is impracticable, into the posterior fornix A powerful flat applicator containing from 80 to 100 mg., similarly screened is placed on the abdominal wall over the fundus The exposure is from thirty to sixty hours, spaced over from five to ten days When the disease is confined to the cervix and the growth is of the fungating type, preliminary curetting is recommended In carcinoma of the rectum the results varied greatly The best results were obtained in persons over 50 in whom the growth was annular, vascular and situated in the upper half of the rectum The plaque-like growth with much surrounding infiltration was rarely improved. In annular, vascular and exuberant growths with a tortuous and constricted lumen radium often relieved the threatened obstruction But sooner or later, both in this type and in spongy growths, fibroid contraction occurred, necessitating colostomy or dilation. When the growth is extensive and ulcerated colostomy is recommended before radium treatment, both to prevent pain and when the growth is high to enable the upper portion to be treated by the passing of a tube through the colostomy aperture down the sigmoid Of fifty-one patients with cancer of the rectum treated to a conclusion, thirty-three were improved ten were not improved eight died and fourteen abandoned treatment

In cancer of the breast it is held that radium should never be used in the early stage as a substitute for operation In rapidly growing medullary cancer, radium had little effect, but in slow cases of the atrophic type it checked the disease, arrested ulceration, and even caused it to heal diminished induration and lymphatic engorgement and relieved pain Frequently it caused disappearance of small cutaneous nodules and reduced infected glands Of 111 patients treated to a conclusion, six were apparently cured, sixty-seven were improved, twenty-four were not improved, and fourteen died Rodent ulcer which had not been subjected to previous treatment with Roentgen rays, carbon dioxid snow, or ionization, did not affect mucous membrane, bone or cartilage, and did not exceed 3 cm in diameter was almost invariably cured by one treatment A full strength applicator is used unscreened and an exposure of from one and a half to three hours is given the time being determined by the amount of induration and infiltration The number of patients with rodent ulcer treated to a conclusion was 169, 122 were apparently cured, thirty-seven improved, eight were not improved, two died, and six abandoned treatment In sarcoma before dissemination into the viscera, the results were usually good Vigorous treatment—burying emanation tubes in the growth and applying externally powerful screened apparatus—is recommended In lymphosarcoma the response was remarkable the growths commencing to shrink in a few days after termination of the treatment and rapidly disappearing In fibroid disease of the uterus in which ordinary methods failed to relieve hemorrhage and the patient declines operation, radium is held to be worth a trial It will almost certainly diminish or abolish hemorrhage and will sometimes produce considerable diminution of the uterus In lupus vulgaris which has not responded to the Finsen light, radium offers a fair prospect if used vigorously Lupus erythematosus frequently responded In obstinate pruritus, associated with leukoplakia or hyperkeratosis, radium was often of great use, but not when there was no lesion and the trouble was purely nervous In arthritis deformans the daily administration of 250 c c. of radium emanation solution of a strength of *not* less than 1 millicurie per liter often produced remarkable improvement, especially in persons under 40, in whom the disease had been of short duration and of infective origin, the changes being periarticular and affecting many joints

PARIS LETTER

Paris, May 3, 1917

Personal

The Academy of Sciences recently held an election to fill the vacancy occasioned by the death of Bouchard E Quenu, professor of clinical surgery of the Faculty of Medicine of Paris and member of the Academy of Medicine, was elected on the second ballot, receiving thirty-one votes against fourteen for Pozzi and five for Bazy Quenu is known for his work in surgery Since the beginning of the war he has taken an active part in solving the great problems of war surgery notably in his successful advocacy of intervention in abdominal wounds

Death of Dr Frédéric Labadie-Lagrave

Dr Frederic Labadie-Lagrave, former physician of the hospitals of Paris died at the age of 73 He was a clinician of repute and published many works notably a treatise on gynecology, written in collaboration with Professor Legueu

The War

MEATLESS DINNERS

The decree of April 14 regulated the sale and consumption of meat by instituting two meatless days each week, but difficulties of transportation due to military operations, as well as difficulty in obtaining a sufficient quantity of vegetables on account of the rigor of the weather obliged the minister of food control to modify this *restriction* A new decree has been signed, therefore, which requires that the butcher shops, as well as retail meat markets of all *sorts* shall be closed at 1 o clock every day and the sale of fresh frozen salt or preserved meats is interdicted during the closed hours Beginning April 25 the consumption of meat, whatever be its form of preparation, is interdicted at and after 6 p m, except on Sunday In consequence, in all establishments open to the public (hotels boarding houses restaurants buffets, wagon restaurants cafes, etc) they must not inscribe on their menus or serve any meat or dish containing meat including poultry rabbit or game. The minister of food control, however has abrogated the rule of January 25 which instituted the regimen of 'two dishes' (only one of meat) in the restaurants

IS THORACOTOMY INDICATED TO ARREST HEMORRHAGE RESULTING FROM WOUNDS OF THE CHEST?

In a previous letter I referred to a report made by Dr Pierre Duval of fourteen cases of urgent surgery in cases of wounds of the lung In ten of these a cure was obtained, therefore, Duval concludes that surgical intervention is indicated in these cases, particularly to arrest a pulmonary hemorrhage which threatens the life of the patient This question was the subject of discussion at a meeting of the Surgical Society of Paris R Gregoire, A Courcoux and G Gross related their experiences at one of the hospitals at the front During a period of twenty-nine months they saw 404 cases of wounds of the chest, and as a result of their observations they stated that hemostatic operations in cases of traumatic pleural effusions are rarely indicated Without doubt there are cases in which early intervention is not only indicated but even demanded, and in which such an operation is possible as well as practicable Some of these patients die at the first aid stations and in the distributing hospitals The cases that are suited for this operation are those that are seen at the base hospitals, and here such an urgent operation is only exceptionally required In the 404 cases reported the operation was necessitated only five times These wounded sometimes die before they can be given help Can the surgeon determine whether or not the patient is bleeding? Neither the shock nor the height of the effusion are sufficient signs Three phenomena indicate that the hemorrhage is still active (1) If blood is still flowing, the fluid obtained by puncture will coagulate in the syringe, (2) the symptoms of mediastinal compression steadily become more embarrassing, (3) the symptoms of shock continue to develop, notwithstanding the treatment When these signs and symptoms are present, immediate intervention is indicated, but these cases are but rarely seen by the surgeon

Hartmann did not concur with Duval, basing his opinion on personal observations made in the surgical automobile hospitals It is true that at Gregoire's hospital it is not practicable to perform a thoracotomy for the purpose of arresting hemorrhage There were thirty-seven deaths among 290 cases (12 7 per cent mortality) On the other hand, at the hospital at which Duval is stationed, the mortality was 18 per cent (thirty deaths among 163 cases) At Jeanbrau's hospital there were sixty deaths among 223 cases of wounds of the chest but twenty-three of these deaths were caused by other lesions (multiple wounds, wounds of the brain and spinal cord, and wounds of the thorax and abdomen) leaving 200 cases of chest wounds with thirty-seven deaths, or 18 per cent, mortality, the same as at Duval's hospital Because of these findings, Hartmann asked whether the good results following the nonoperative treatment of these hemorrhages were not due to the fact that the surgeons at the surgical automobile hospitals receive only the selected cases, whether the indications for surgical intervention were not more often present there than in the hospitals of the first line These patients are often received late, as he has been able to confirm Of eighty-five patients arriving within a given time twenty-five were received dead Six of these died of multiple wounds one each of a wound of the brain, of the spinal cord, a thoraco-abdominal injury, and complete section of the vessels and nerves of the arm, two died suddenly, although only a slight hemothorax was present One died from a severe fracture of the scapula and ribs, and four from large destructive wounds of the thorax In one case there were no details given as to the cause of death Only one patient, who died after about twelve hours from a hemopneumothorax could, perhaps, have been benefited by the operation Of the surviving sixty patients, not one presented any grave symptoms as the result of the hemorrhage In one other first line hospital there were, in a given period, fifty-nine cases of chest wounds with eight deaths, three from pneumonia, one each from pulmonary congestion, a pleuropulmonary infection, pleurisy, septicemia and syncope, the last-mentioned occurring at the time an exploratory puncture was made (at the necropsy 700 gm of fluid were found in the pleural cavity) In the fifty-nine cases there was at no time any indication for surgical intervention to check the bleeding, and not one of these patients died from hemorrhage An examination of 534 cases of chest wounds, in which the patients were received at the surgical automobile hospitals and the first line hospitals during one of the battles, leads to the conclusion that thoracotomy as a primary operation to arrest pulmonary hemorrhage is correct in theory, but practically it is not to be considered

Pierre Duval reported an additional series of thirteen cases with operation since his first report Eight of these patients were operated on to check a threatened hemorrhage, three died and five were cured Duval is convinced that this is indicated in all cases of open wounds of the thorax and in all cases of immediate grave hemorrhages Thoracotomy with suture of the lung will save two thirds of these patients The operation on the lung is also indicated in cases of fracture of the ribs accompanied by wounds of the lung In these cases spicules of bone nearly always puncture the lung, and cause an immediate grave hemorrhage with subsequent suppuration of the pleura and lung, occurring more or less rapidly The indication to remove such bone fragments must be met promptly

At one of the last meetings of the Paris Medical Society, Dr Maisonnet presented some statistics of cases he had observed while attached to one of the hospitals of the first line in Artois He has had only one case of wounding of both lungs, and this case terminated fatally Among 104 cases of wounds of one lung there were eleven deaths, all occurring within the first forty-eight hours In no case was there found at the necropsy a vascular lesion which would account for the bleeding Furthermore, he has never been of the opinion that the patient died of a division of the vessels He has had four deaths from the seventh to the tenth day of pneumonia, six deaths after the tenth day (three from empyema, one from liver cirrhosis, one from meningitis incident to a cranial lesion, and one from pneumonia) The total mortality at this hospital was 20 per cent If one adds to these deaths the rapid deaths occurring before the arrival of the wounded at the various base hospitals (from large, open wounds of the thorax and severe hemothorax), one sees that the mortality of wounds of the chest is considerable

Hartmann concluded, from the experience of Maisonnet, Gregoire, Courcoux and Gross, as well as his own, that the indication for thoracotomy to arrest hemorrhage is never present Furthermore, one can wonder at the frequency with which Duval has encountered it Perhaps the men with hemorrhages would be benefited by early intervention at properly equipped first aid stations In the hospitals of the first line, and more so in the surgical automobile hospitals situated farther back, the results obtained have shown that absolute immobilization gives results superior to those obtained from operative intervention The cases of severe hemorrhage have usually proved fatal before the patient arrived at these hospitals

MECHANOTHERAPY AND REEDUCATION

The National Union of Cripples has opened an inquiry on the status of mechanotherapy in France and has appointed a committee of which the president will be Eugene Rochard, general secretary of the Surgical Society of Paris It seems that at present the health service is interested only in giving professional reeducation Rochard thinks that aside from this, mechanotherapy ought not be neglected This concerns notably men injured by fractures and who are liable, during treatment, to ankyloses or muscular atrophies, and who in their working capacity will be in a state of inferiority as compared with their noncrippled fellows They may recover in a great majority of cases and be returned to their combatant units, or be restored to their full working capacity Mechanotherapy alone can attain this result Rochard thinks that the question of mechanotherapy has been badly handled from the beginning of the war In the first place, the proper way would have been to appoint a commission of surgeons who would have studied all existing apparatus chosen the best among them and advised their adoption by the health service Instead of that, they employed, without preliminary inquiry, apparatus badly conceived, awkward, and not effective for its purpose This has resulted in neglect of the method, and mechanotherapy is discredited It is time yet to return to this practice, which alone can restore the motility of ankylosed articulations, and the activity of atrophied muscles

INTERALLIES CONFERENCE ON THE DISABLED

This conference, sitting in the Grand-Palais, May 8 to 12 inclusive, will be presided over by the President of the Republic The six questions to be discussed are (1) physical reeducation, (2) professional reeducation, (3) the placement and economic establishment of cripples, (4) the economic and social interests of the crippled, (5) the blind, the deaf, and those invalided by central nervous troubles, and (6) publications and propaganda In addition to attendance on the sessions, visits will be made to the school for professional reeducation of Paris, to the National Professional Institute for Invalids of the War at Saint Maurice, and to the Belgian Military Institute for Professional Reeducation of Port-Villez (Eure)

Marriages

William Tarvin Fenker, M.D., State Soldiers' Home Ohio, to Miss Lillian Cheetham of New Straitsville, Ohio, at Monroe, Mich., May 5

Edgar Hamill Hughes M.D., Northampton Mass. to Miss Florence A. Martindale of Camden, N. J., at Holyoke, Mass., May 21

Ralph Waite Denney, M.D., Waltham, Mass. to Miss Margaret May Alexander of East Boston, Mass., May 10

Theodore William Neumann M.D. to Miss Florence Middleton Pilgrim, both of Poughkeepsie, N. Y., April 30

Daniel Davis, M.D., Baltimore to Willa Mae Fricke, M.D., of Rochester, Minn., at Wausau Wis., May 17

Jacob Leon Herman, M.D., Philadelphia to Mrs. Leonora Owsley Ackley, in Norristown, Pa., May 12

Allen G. Caldwell, M.D., Covington, Ky., to Miss Antoinette Yeager of Cincinnati May 12

Balduin Harmann Lucke, M.D., Philadelphia, to Marian Hague Rea, M.D., Boston, March 2.

Deaths

Joseph Carter Hearne, M.D., San Diego, Calif., Jefferson Medical College, 1872, aged 66, a Fellow of the American Medical Association and a member of the Pacific Association of Railway Surgeons, local surgeon of the Sante Fe System, a veteran of the Civil War, formerly chief surgeon of the Hannibal and St. Joseph Railroad and secretary of the Missouri State Board of Health, president of the San Diego City Board of Health and surgeon to the Pacific Coast Steamship Company, died at his home, May 9

Charles A. von Hoffman, M.D., San Francisco, University of Leipzig Germany, 1875, aged 65, a Fellow of the American Medical Association, emeritus professor of gynecology in the University of California, gynecologist to St. Luke's Hospital, obstetrician to the Maternity Cottage, consulting gynecologist to the German Hospital and consulting physician to the San Francisco Lying-In Hospital and the Florence Crittenton Home, died at his home, May 13, from cerebral hemorrhage

Frank Albert Applegate Stoney, M.D., Brooklyn, Long Island College Hospital 1897, aged 42, formerly a Fellow of the American Medical Association, a member of the Medical Society of the State of New York, a member of the staff of the Bay Ridge Hospital, formerly division chief in the bureau of contagious diseases of the New York Department of Health, and chief of the tuberculosis clinic died at Seaton Hall Lakewood, N. J., May 13, from heart disease.

John Carpenter Schapps, M.D., Butte, Mont., Bellevue Hospital Medical College, 1880, aged 60, a Fellow of the American Medical Association a member of the American Orthopedic Association and once first vice president of the Medical Association of Montana, formerly orthopedic surgeon to St. Mary's and Kings County hospitals Brooklyn orthopedic surgeon to the Murray Hospital and Paul Clark Home, Butte, died at his home, May 16

James Harvey Spruance, M.D., Wilmington, Del., Jefferson Medical College, 1889, aged 50, formerly a Fellow of the American Medical Association, a member of the Delaware State Medical Society, formerly mayor of Wilmington a member of the state legislature, state board of pharmacy and local board of education died at his home, May 16 from pneumonia

Charles Dake Crank, M.D., Cincinnati, Hahnemann Medical College, Philadelphia, 1871 aged 73, emeritus professor of pediatrics and one of the founders of Pulte Medical College Cincinnati, attending physician to the Cincinnati Orphans Hospital and a member of the staff of the Bethesda Hospital, chief of staff of the Home for the Friendless and Foundlings, died at his home, about May 7

Robert Ream, M.D., Maryville, Mo., Missouri Medical College, St. Louis 1895, aged 47, for many years a druggist died at the home of his brother in Van Wert, Ohio March 5 from a gunshot wound of the head, self-inflicted it is believed with suicidal intent while despondent on account of ill health

William Hassert Biggam, M.D., Brooklyn, College of Physicians and Surgeons in the City of New York, 1881, aged 61, formerly a Fellow of the American Medical Association, gynecologist to the Eastern District Hospital and visiting physician to the Home for the Aged, Brooklyn, died in that city, May 9, from heart disease.

Samuel Watson Acton, M.D., Trussville, Ala., University of Alabama, Mobile, 1860, aged 83, formerly a Fellow of the American Medical Association, a member of the Medical Association of the State of Alabama, surgeon in the Confederate service during the Civil War, died at his home, May 6

Otto W. A. Schirmer, M.D., New York, University of Greifswald, Germany, 1888, aged 52, professor of diseases of the eye in the New York Post-Graduate Medical School, ophthalmologist to the Knapp Memorial, St. Mark's and Bronx hospitals, died in the Polyclinic Hospital, New York, May 6

James Edward Taylor, M.D., Ovid Mich., Western Reserve University, Cleveland 1886, aged 55, a Fellow of the American Medical Association and once president of the Clinton County Medical Association, health officer of Ovid village and township, died at his home, May 13, from heart disease

Nathan Johnson, M.D., Fitchville, Conn., New York University, New York, 1878, aged 66, health officer and medical examiner (coroner) of Bozrah Township since 1892, for several years a member of the Fitchville Board of Education, died at Bozrah, Conn., April 17, from arteriosclerosis

Samuel Warren Holloway, M.D., Louisville, Ky., Louisville Medical College, 1891, aged 49, formerly assistant in surgery and clinical surgery in the Kentucky School of Medicine, Louisville, died at the home of his mother in Louisville, April 19 from intestinal obstruction

William C. Rohu, M.D., Chicago, Bennett Medical College, Chicago, 1891, aged 64, formerly a Fellow of the American Medical Association, for seventeen years in charge of the dispensary of the Passavant Memorial Hospital, Chicago, died at his home, May 20, from diabetes

Louis N. Wells, Chicago (license, Indiana 1897), aged 77, formerly a member of the Indiana State Medical Association, for many years a practitioner of De Motte, Ind., a veteran of the Civil War, died at the home of his sister in De Motte, May 3, from cerebral hemorrhage

John Lorenzo Davison, M.D., Toronto, Ont., Trinity Medical College, Toronto, 1884, M.R.C.S. (Eng.), 1885, at one time professor of clinical medicine in the University of Toronto, died at the home of his brother in Napanee, Ont., April 27, from heart disease.

Henry A. Willis, M.D., Whitehall, S. C., Medical College of the State of South Carolina, Charleston, 1897, aged 46, a member of the South Carolina Medical Association and surgeon of the Savannah River Lumber Company, died in a hospital in Charleston April 30

Cyril P. Brown, M.D., Spring Lake Mich., Rush Medical College, 1870, aged 72, formerly a Fellow of the American Medical Association, a member of the Michigan State Medical Society, a veteran of the Civil War, died at his home, May 4 from pneumonia

Walter Demarest, M.D., New York and Chicago, College of Physicians and Surgeons in the City of New York 1878, aged 62, well known as an organist, died in the New Jersey State Hospital, Morris Plains, May 5, after an invalidism of twenty-three years

Hyman Solomon Shlevin, M.D., Brooklyn Yale University New Haven Conn., 1892, aged 52, a member of the Medical Society of the State of New York, died from cerebral hemorrhage, May 12, while working under his motor car in front of his home.

Jeremiah Wilson, M.D., Morehead Ky., Kentucky School of Medicine, Louisville, 1889, aged 64, health officer and county physician of Rowan County Ky., local surgeon to the Chesapeake and Ohio System, died at his home, April 25

James W. Teams, M.D., Ridgeway, S. C.; Medical College of the State of South Carolina Charleston, 1894, aged 44 a member of the South Carolina Medical Association, died at his home February 24, from nephritis

John W. Spear, M.D., Mason City, Ill., Rush Medical College, 1875, aged 68, a Fellow of the American Medical Association, for many years local surgeon for the Illinois Central Railway, died at his home, May 5

Alexander Loew, M D, Chicago, University of Vienna, Austria, 1868, aged 70, formerly a Fellow of the American Medical Association, a member of the Illinois State Medical Society, died at his home, May 11

William Fremont Hubbard, M D, Portland, Ore, University of Michigan, Ann Arbor, 1893, aged 61, a Fellow of the American Medical Association, a specialist in the diseases of women, died at his home, May 6

Harriet Noble Watson, M D, Albion, N Y, New York Medical College and Hospital for Women, New York, 1878, a member of the Medical Society of the State of New York, aged 81, died, May 2

Theophilus H East, M D, La Junta, Colo, University Medical College, Kansas City, Mo, 1900, aged 63, died in La Junta, March 19, from surgical shock following a laparotomy

Hall Staples, M D, West Acton, Mass, Dartmouth Medical School, Hanover, N H, 1892, aged 46, a member of the Massachusetts Medical Association, died at his home, March 7

James E Brennan, M D, Louisville, Ky, Louisville (Ky) Medical College, 1890, aged 49, formerly a member of the Kentucky State Medical Association, died at his home, April 26

Frederick William Colman, M D, Lodi, Calif, Cooper Medical College, San Francisco, 1873, aged 78, formerly health officer of Lodi, died at his home, April 24, from senile debility

James B Orwig, M D, Toledo, Ohio, Cleveland Homeopathic Medical College, 1899, aged 42, formerly consulting physician to the Oil City (Pa) Hospital, died at his home, May 10

Alfred James Hamilton, M D, Cassville, Pa, University of Michigan, Ann Arbor, 1870, aged 71, formerly a member of the Michigan State Medical Society, died at his home, May 6

Orlando E Black, M D, Wilsonville, Ala, University of the South, Sewanee, Tenn, 1900, aged 41, a Fellow of the American Medical Association, died at his home, March 13

William David McIlmoyle, M D, Bracebridge, Ont., University of Toronto, Ont., 1908, aged 32, died February 21, twenty-four hours after an operation on the tonsils

Courtney T Allen, M D, Dorchester, N B, College of Physicians and Surgeons, Baltimore, 1903, aged 38, died at his home, February 19, from cerebral hemorrhage

Benjamin Franklin Freeman, M D, Ridgeville, Ind, Medical College of Indianapolis, 1898, aged 39, died at his home, April 1, from chronic parenchymatous nephritis

James A McPherson, M D, Grand Rapids, Mich, Detroit Medical College, 1872, aged 69, a Fellow of the American Medical Association, died at his home, May 5

Hiram Becker, M D, Albany, N Y, Albany Medical College, 1864, aged 76, for many years a practitioner of Slingerlands, N Y, died at his home, May 6

Donald Alexander McCrimmon, M D, Ripley, Ont, McGill University, Montreal, 1860, aged 81, died at his home, March 2, from chronic interstitial nephritis

Claude Lucas Wilson, M D, Middletown, Conn, College of Physicians and Surgeons in the City of New York, 1899, aged 45, died at his home, April 25

Herbert Eugene Aldrich, M D, Philadelphia, Hahnemann Medical College, Philadelphia, 1883, aged 60, died at his home, May 10, from heart disease

Don E Ashley, M D, Guys Mills, Pa, Western Reserve University, Cleveland, 1871, aged 71, died at his home, May 8, from cerebral hemorrhage

William Thomas Burdick, M D, Tolesboro, Ky, Syracuse (N Y) University, 1875, aged 67, died at his home, April 17, from cerebral hemorrhage

Frank Henry Flood, M D, Elmira, N Y, New York University, New York, 1873, aged 65, formerly mayor of Elmira, died at his home, May 9

Carl Paul Rafael Cramer, M D, Cedar Grove, Ind, Eclectic Medical Institute, Cincinnati, 1910, aged 47, died at his home, May 5

Lenore Perky Webster, M D, Washington, D C, Hahnemann Medical College, Chicago, 1890, aged 59, died at her home, May 3

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

TANLAC TESTIMONIALS

Dead Men and Live Newspapers Endorse a Humbug

Most of our readers are familiar with "Tanlac" The flamboyant advertisements of this nostrum are particularly in evidence in those parts of the country where the sale of alcoholics under their own names is prohibited by law The stuff has been analyzed in the Association's laboratory and the chemists' report when stripped down to essentials was to the effect that Tanlac is a wine containing 17 per cent alcohol to which had been added some bitters, a small amount of laxative and some glycerin Mr Samuel Hopkins Adams has at different times paid his respects to Tanlac, and one of his articles has been reprinted in connection with the other matter dealing with Tanlac appearing in our pamphlet "Miscellaneous Nostrums" More recently Mr Adams again reverts to Tanlac, and in the New York *Tribune* for April 29 he tells how the Tanlac concern hired as its legal counsel the president of the Atlanta (Ga) Ad Men's Club He tells further how this individual, one P C McDuffie, appeared before the Shreveport (La) Ad Club to defend the nostrum which the Shreveport Ad Club's Vigilance Committe had hit by declaring its advertising to be "misleading, deceptive and spurious"

Mr Adams, in telling the story which appeared in the *Tribune* for April 29, 1917, said in part

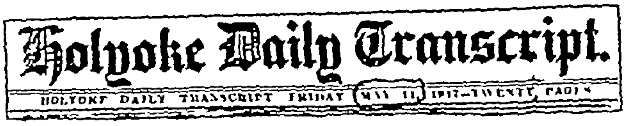
"Who are the true friends of a quack medicine? Not those who extol its benefits through testimonials in the public prints Their eulogies are commonly the toll paid by ignorance to flattery or trickery, sometimes the return for bribery In time the eulogists learn (if they live long enough) that the nostrums which they commend have done them no good But the behind-the-scenes testimonial writers, those who lend their influence and support to quackery when it is on its defense, never supposing that they will be publicly held to account for their shameless name-peddling—these are the patent medicine faker's true friends In this category are listed the newspapers and, in rare instances, the advertising club officials who, in exchange for the money of the frauds, deliver their impressive but worthless guarantees of good faith For them the old, cynical slogan of the led captain and the purchased pen stands sufficient and expressive 'Whose bread I eat, his song I sing'

"It is my pleasant privilege here to draw forth from their modest retreat in the shadows and to set out in the light of plain print the chorus of those who have been singing, with purchased voices, the song of that famous fake medicine, Tanlac Here is the roll of dishonor

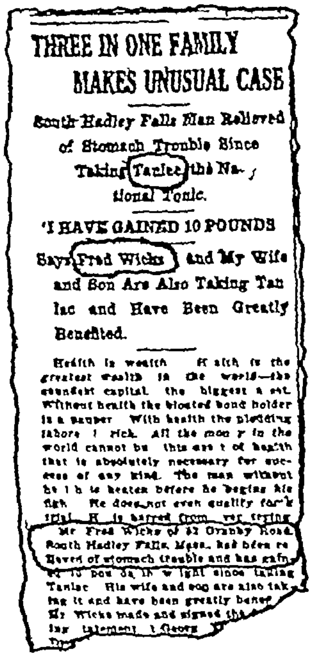
The Atlanta *Constitution*
The Atlanta *Journal*
The Birmingham *Age Herald*
The Birmingham *News*
The Birmingham *Ledger*
P C McDuffie, President of the Atlanta Ad Men's Club
The Memphis *Commercial Appeal*
The Memphis *News Scimitar*
The Montgomery *Advertiser*
The Montgomery *Journal*
The Nashville *Banner*
The Shreveport *Times*

"According to its claims, Tanlac is a 'magic medicine' Its magic is derived from the great wizard, Alcohol It's a disguised booze, and barely disguised at that, except on the label It purports to be the 'discovery' of one L T Cooper, Cooper is a confessed and convicted fraud, having pleaded guilty to an indictment in Kentucky, three years ago, when he was nostrum-pedling in that state Since then he has been doing a tremendous Tanlac business through the South the principal outlet being G F Willis, the Southern distributing agent, with headquarters at Atlanta, Ga The *Tribune* has already illuminated some of Willis' activities It was he who put out a manufactured testimonial from a Chattanooga woman, on whom Tanlac 'wished' in print not only an assortment of ills from which she had never suffered but also a family of children which she never had! Subsequently he attempted to impose a press consorship on the

Mobile *Tribune*, which was exposing his fake, and for a time succeeded in keeping real facts about Tanlac out of print through an injunction, which, however, was vacated by Judge Henry D Clayton Instead of suffering injury from the attack made on it by the quack concern, the Mobile *Tribune* gained such prestige from its courageous fight for freedom of the press that it shortly after blossomed out from a weekly into a daily paper"


Holyoke Daily Transcript.

HOLYOKE DAILY TRANSCRIPT FRIDAY MAY 11 1917—TWENTY PAGES


THREE IN ONE FAMILY MAKES UNUSUAL CASE

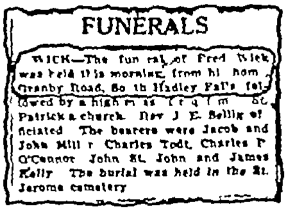
South Hadley Falls Man Relieved of Stomach Trouble Since Taking Tanlac the National Tonic.

'I HAVE GAINED 10 POUNDS

Says Fred Wicks and My Wife and Son Are Also Taking Tanlac and Have Been Greatly Benefited.

Health is wealth Health is the greatest wealth in the world—the soundest capital the biggest asset. Without health the bloated bond holder is a pauper With health the plodding laborer is rich. All the money in the world cannot buy this asset of health that is absolutely necessary for success of any kind. The man without health is beaten before he begins his fight He does not even qualify for a trial. He is barred from ever trying

Mr Fred Wicks of 82 Granby Road South Hadley Falls, Mass., had been relieved of stomach trouble and has gained 10 pounds in weight since taking Tanlac His wife and son are also taking it and have been greatly benef
Mr Wicks made and signed the
ing statement t Georg
Dr


FUNERALS

WICK—The funeral of Fred Wick was held this morning from his home Granby Road, South Hadley Falls followed by a high mass of requiem at St. Patrick's church Rev J E Bellig officiated The bearers were Jacob and John Miller Charles Todt, Charles F O'Connor John St. John and James Kelly The burial was held in the St. Jerome cemetery

Reduced facsimile of two clippings from the Holyoke Daily Transcript May 11 1917 On the left the Tanlac advertisement tells the public that Mr Fred Wick has been relieved of stomach trouble on the right *the reader is advised that* the funeral of Fred Wick was held this morning

Mr Adams then tells how the Vigilance Committee of the Shreveport Ad Club investigated a testimonial purporting to have been the *signed statement* of a Mrs Pipes of Shreveport. The testimonial was to this effect

> I was in bed for weeks but I'm a well and happy woman today and I owe it all to your Tanlac. It would be hard to describe all my dreadful sufferings for ten years No one seemed to understand my case and no treatment or medicine helped me until I got Tanlac. All my family and friends are delighted over my recovery

The facts were that at the *time this testimonial* was published in the Shreveport papers Mrs Pipes was suffering from cancer of the breast which had reached a hopeless stage. She has since died As Mr Adams says

'And while her life was being eaten away by the dreadful scourge the Tanlac ghouls in Atlanta were making capital out of her agony and writing in above her alcohol-wheedled signature references to her recovery' and the assertion 'I'm a well and happy woman today'"

These facts learned by the Vigilance Committee of the Shreveport Ad Club, were but part of the evidence it had accumulated which caused it to denounce the Tanlac advertising Some further evidence in the committee's possession was also the facts of 'a Cincinnati testimonial for Tanlac published several days after the testimonial giver had died of the condition of which Tanlac had cured him'

The unenviable publicity thus given Tanlac in Shreveport caused apparently a falling off of the sales with the result that the local drug store having the Tanlac agency telegraphed to Atlanta for help The help came in the person of P C. McDuffie, counsel for the Tanlac concern and president of the Atlanta Ad Men's Club McDuffie demanded retraction and exoneration from the Shreveport Ad Club when he appeared before that body with his principal G F Willis What follows is thus described by Mr Adams

"Up rose Mr Hudson of the Vigilance Committee, and asked

'Have you the testimonial of Mrs T W Pipes?'

"'We have,' said McDuffie

"'Will you be good enough to read it?'

"'Mr McDuffie obliged Then another questioner popped up (indeed, from this time the queries were fired at McDuffie and Willis from all parts of the room)

"'Who wrote that testimonial?'

"'It was handled in the Atlanta office of the Massingale Advertising Agency' (St Elmo Massingale, head of the Massingale Agency, is a former president of the Atlanta Ad Men's Club, which, by the way, appears to be considerably tinged with Tanlac)

"'Was the questionnaire form filled out *there?*'

"Here Willis rose 'I personally edit and supervise the copy of every testimonial we put out,' was his significant *statement*

"'Did Mrs Pipes write that she was "well and happy," as the testimonial states?'

"Neither McDuffie nor Willis would state that she wrote it Indeed, they could not well do so, in view of the fact that the answers to the form questions were not in her writing

"'Was it written in Atlanta?'

"'It was edited in Atlanta'

"'Where do you get that "well and happy" stuff?'

"McDuffie read what purported to be a statement of Mrs Pipes' case It did not assert that she was well and happy 'But if it doesn't mean that, what does it mean?' he challenged

"'That lady' said a local physician 'is now at the Charity Hospital where she was operated on by Dr Sidney Williams for cancer of long standing Did you know that?'

"But Mr McDuffie didn't want to talk about that. He dodged

'Is it true,' asked some one else, 'that Mrs Pipes' daughter told your agent that the testimonial was false and demanded that it be withdrawn?'

"'She said something to Mr Reid about it. He said that all he could do was to communicate with us'

"'Did he do that?'

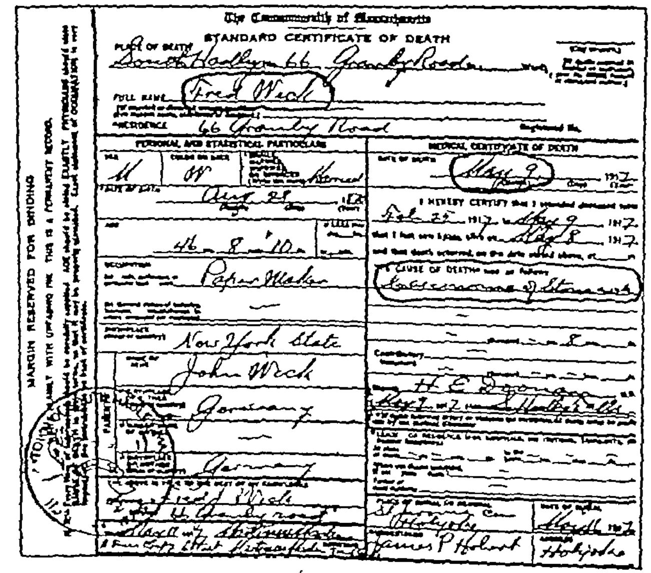
"'Yes' spoke up Willis, 'I got his letter'

"'What have you done about it?'

"'Nothing up to the present I saw no reason to withdraw the testimonial'

'Subsequently it was withdrawn The testimonial in the Cincinnati papers from a dead man was then brought up for discussion Mr McDuffie explained that this was a regrettable mistake After some arguments a motion was carried against the heated protest of McDuffie, to refer the whole matter back to the Vigilance Committee. When a motion to adjourn followed the lawyer-president of the Atlanta Ad Men's Club hammered the table and shouted 'You shall not adjourn until you have exonerated us!' 'Exoneration would have been worth a hundred thousand dollars to Tanlac as advertising material.

"They didn't get it. But that wasn't for lack of a final appeal based on newspaper support."


MARGIN RESERVED FOR BINDING

The Commonwealth of Massachusetts

STANDARD CERTIFICATE OF DEATH

PLACE OF DEATH South Hadley 66 Granby Road

FULL NAME Fred Wick

RESIDENCE 66 Granby Road

PERSONAL AND STATISTICAL PARTICULARS

M W Married

DATE OF BIRTH Aug 28

AGE 46 8 10

OCCUPATION Paper Maker

BIRTHPLACE New York State

NAME OF FATHER John Wick

BIRTHPLACE Germany

Germany

Fred Wick
66 Granby road

MEDICAL CERTIFICATE OF DEATH

DATE OF DEATH May 9 1917

I HEREBY CERTIFY that I attended deceased from Feb 25 1917 to May 9 1917

that I last saw h alive on May 8 1917

CAUSE OF DEATH was as follows
Carcinoma of Stomach

May 9 1917 So Hadley Falls

St Jerome
Holyoke

May 11 1917

James P Hobert

Holyoke

Reduced facsimile of the death certificate of Fred Wick. Note that he died of cancer of the stomach May 9 although *the* Tanlac concern told the public on May 11 that he had been relieved of stomach trouble

Mr Adams tells how McDuffie then presented letters and telegrams from various newspaper publishers, the papers in question being the ones listed at the beginning of this article He then continues

"Some other interesting Tanlac matter has since come to light 'Prominent' physicians who have given testimonials have been shown to be drug-store-counter practitioners Heyder Barr, left fielder of the Shreveport nine, testified to his desperate condition, how he ran down until he was too weak to play ball, before Tanlac put him on his feet again If he was too weak to play ball he concealed it admirably, for neither the club physician nor the club pay-roll ever found it out John T Elliott is another Shreveport man who was supplied with some desperate symptoms by the Tanlac testimonial experts Although his ailments had been terrifying him for twenty years (according to the advertisement) he forgot all about them when he was examined for life insurance, and the examining physician found no trace of them Then there is—or was—Mrs Jacquet, who gave public thanks for Tanlac in print, and died last week"

In connection with what has been written above, a further interesting side-light on the Tanlac quackery was brought to the attention of THE JOURNAL during the past few days Dr F L Leland of South Hadley Falls, Mass, sent to THE JOURNAL office a copy of the Holyoke *Daily Transcript* of May 11 This single issue of the paper contained two items One of these was an advertisement stating that Mr Fred Wick of Granby Road, South Hadley Falls, Mass, "has been relieved of stomach trouble and has gained ten pounds in weight since taking Tanlac" The other item, under the ominous black-faced heading "Funerals," advised the readers that "the funeral of Fred Wick was held this morning from his home, Granby Road, South Hadley Falls " Through the further courtesy of Dr Leland we have received a certified copy of the death certificate of Fred Wick which shows that the poor fellow instead of having "been relieved of stomach trouble" by the use of Tanlac had in fact died of carcinoma of the stomach, TWO DAYS BEFORE THE TESTIMONIAL WAS PUBLISHED

We do not expect that the recounting of these damning facts will result in the withdrawal of Tanlac from the market It is hopeless to expect that the men who are exploiting it and the newspapers that are sharing the profits of its sale will be in the least affected by any facts that may be brought out regarding Tanlac All that can be hoped is that by repeated publication of such instances as these the public and also the decent advertisers of honest and meritorious products will at last be aroused to the point where it will cost the newspapers more to accept advertisements of such humbugs as Tanlac than to reject them When that time comes, and commercial expediency accomplishes what moral responsibility failed to accomplish, Tanlac and its congeners will be no more

---

How Syphilis is Treated in France—Carle and Carrere have taken advantage of the unprecedented opportunity in the military hospitals for seeking out syphilitics and investigating the treatment they have had As the soldiers come from all parts of the country and the colonies they were thus able to get an extensive oversight on the way in which syphilis is treated throughout the country They tabulate their findings in the *Annales de Dermatologie,* 1917, **6,** 277, grouping the cases by the adequacy of treatment They were impressed by the almost universal change from internal to subcutaneous or intravenous treatment, even in the remotest hamlets But in over 14 per cent the syphilis was not recognized until in a late stage, and in over 22 per cent it had never been suspected Only 4 74 per cent were entirely free from manifestations of the disease of those having a record of thorough treatment This group, however, included 6 16 per cent still with syphilitic lesions, notwithstanding the thorough treatment Only 11 85 per cent of the total had been given internal treatment alone Only 40 per cent had been given injection treatment, but it had been far from adequate, and most of them presented various syphilitic lesions It is evident from these findings that physicians generally in France do not give adequate dosage, and do not keep them up long enough to actually exterminate syphilis

Correspondence

THE PATIENT'S SIDE

To the Editor—The following letter is an interesting human document Perhaps we hospital physicians who are habituated to all kinds of distress and suffering do not always pay sufficient attention to the sensitive temperaments of certain patients, and the effect it has on them to hear themselves and their ailments discussed

The writer of the letter is a patient who recovered, some ten or twelve years ago, from what was apparently malignant endocarditis, and on whose face the therapeutic history is written in the form of silver staining He was left with a chronic lesion which compelled him to give up his career and remain at home, a semi-invalid, helping his sister in her millinery business Recently what seemed to be the threatenings of a relapse induced me to send him to the hospital again He stayed, however, only a few days, and writes this letter in apology for his insistence on returning home against my advice SOLOMON SOLIS COHEN, M D, Philadelphia

My Dear Doctor Solis Cohen—And so I am home again I feel that I owe you a statement why I could not stay in this most beautiful of institutions and everybody treating me so kindly

For the last few years since my health improved I was mostly among healthy people, everybody looked at me as at his equal and I have tried to forget my troubles and condition The kind advices and encouragement I received from you and the love of those who surrounded me really made me feel stronger all the time and I even began to hope for a more active life But coming to the hospital I became transformed from a person into a case, into a very peculiar case worth while examining, and every physician—and there are a great many coming, younger and older men—came over to see the phenomenon (I know that it is their duty and have really nothing against them) and to every one I had to repeat my ill fated history, tell the story of my broken life I have a romantic temperament (whether to my credit or discredit), so all this injured me deep in my heart The discussions about my condition opened old wounds anew, and I felt like a criminal in the court of justice awaiting his sentence of life and death Thus I have decided that so long as my condition permits me, I shall stay home and try to enjoy life while it lasts.

AMERICA'S FINANCIAL CONTRIBUTION TO GERMANY ON ACCOUNT OF OUR PATENT LAWS

To the Editor—I have read several articles in which the medical fraternity has been proud of the fact that no death-dealing instrument used in the present war has been invented by their profession, but that their part as usual is to alleviate suffering humanity I also have read that our patent laws are such that every physician and druggist who purchased aspirin before the war had to pay 43 cents an ounce in the United States, whereas the same was sold in Austria-Hungary at 4 cents an ounce and in the British Isles at 6 cents an ounce, we paying 37 cents an ounce more than any other country Now, if we have been paying this much more in proportion on all drugs on which Germany has a patent, will some one who has access to the records showing the importations of this class of goods please see how much the physicians and druggists have been taxed indirectly by Germany to accumulate the enormous amount of money she has used in the war? It seems that we have paid our part of the taxes to Germany I am opposed to being taxed indirectly by Germany in order to help her try to exterminate the rest of humanity While we are urging the abolition of the patent on salvarsan, let us also insist on only a reasonable profit for Germany on all patents she has on medicines

H SCHMIDT, M D, Addieville, Ill

PUT "NOSTRUMS AND QUACKERY" IN THE LIBRARY

To the Editor—The Propaganda Department of the American Medical Association merits from the medical profession the heartiest support. My copy of "Nostrums and Quackery," as a circulating library of one volume, is constantly busy If I be entitled to a suggestion it would be this A copy of the above named publication should be placed, by physicians, in every public library in America

EDGAR C DENNY, M D, Milton, Ind

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery July 9 Chairman Dr S W Welch Montgomery

Alaska Juneau July 3 Sec. Dr H C DeVighne Juneau

Arizona Phoenix, July 2 3 Sec Dr John W Thomas 306 Goodrich Bldg Phoenix

California San Francisco July 10 Sec., Dr Charles B Pinkham 529 Forum Bldg Sacramento

Colorado Denver July 3 Sec. Dr David A. Strickler, 612 Empire Bldg Denver

Connecticut Regular New Haven, July 10 11 Sec Dr Charles A Tuttle, 196 York St. New Haven

Connecticut Eclectic New Haven July 10 Chairman, Dr John W Fyfe Saugatuck.

Connecticut Homeopathic New Haven July 10 Sec., Dr Edwin C M Hall 82 Grand Ave. New Haven

Delaware Dover and Wilmington June 19 21 Sec. Dr H W Briggs, 1026 Jackson St Wilmington

District of Columbia Washington July 10 Sec, Dr Edgar P Copeland The Rockingham Washington

Florida, Regular Palatka June 19 20 Sec. Dr E. W Warren, Palatka.

Illinois Chicago June 14 16 Sec. Dr C St. Clair Drake Springfield

Indiana Indianapolis July 10-12 Sec. Dr W T Gott 84 State House Indianapolis

Iowa Iowa City June 7 9 Sec. Dr G H Sumner Capitol Bldg Des Moines

Kansas Topeka June 19 21 Sec. Dr H. A Dykes Lebanon

Kentucky Louisville June 19 21 Sec. Dr A T McCormack Bowling Green

Louisiana New Orleans June 7 9 Sec Dr J A Henderson 921 Canal St. New Orleans.

Maine Augusta July 5-6 Sec., Dr Frank W Searle, 776 Congress St., Portland

Maryland Baltimore, June 19 Sec Dr J McP Scott 137 W Washington St. Hagerstown

Massachusetts Boston July 10-12 Sec. Dr Walter P Bowers, Room 501 No 1 Beacon St Boston

Michigan Ann Arbor June 12 14 Sec, Dr B D Harison 504 Washington Arcade Detroit

Minnesota Minneapolis, June 5 8 Sec. Dr Thomas S McDavitt Lowry Bldg St. Paul

Mississippi Jackson June 19 20 Sec. Dr W S Leathers Oxford.

Missouri St. Louis June 18 Sec Dr J A B Adcock, Jefferson City

New Hampshire Concord June 25 26 Sec. Dr W T Crosby, Beacon Bldg Manchester

New Jersey Trenton June 19 20 Sec. Dr Alexander MacAlister, 438 East State St., Trenton

North Carolina Raleigh June 19 Sec Dr H. A Royster 423 Fayetteville St. Raleigh

North Dakota Grand Forks July 3 Sec Dr George M Williamson Grand Forks

Ohio Columbus June 11 14 Sec. Dr George H Matson State House, Columbus

Oklahoma Oklahoma City July 10-11 Sec Dr R V Smith Tulsa

Oregon Portland June 5 Sec. Dr Herbert S Nichols Corbett Bldg Portland

Pennsylvania Philadelphia and Pittsburgh July 10 12 Sec Mr Nathan C Schaeffer State Capitol Harrisburg

Rhode Island Providence July 5 Sec. Dr Gardner T Swarts 315 State House, Providence

South Carolina Columbia June 12 Sec. Dr A. Earle Boozer 1806 Hampton St. Columbia

South Dakota Deadwood July 10 Sec. Dr Park B Jenkins Waubay

Tennessee Knoxville, Memphis and Nashville, June 15 16 Sec Dr A B De Loach Scimitar Bldg, Memphis

Texas Austin June 19 21 Sec. Dr M F Bettencourt Mart

Vermont Burlington July 10-12 Sec. Dr W Scott Nay Underhill.

Virginia Richmond June 19 22 Sec Dr J W Preston 215 S Jefferson St Roanoke.

Washington Seattle July 3 5 Sec Dr C N Suttner Walla Walla

West Virginia Charleston, July 10 Sec. Dr S L. Jepson Capitol Bldg Charleston

Wisconsin Milwaukee June 26 Sec. Dr J M Dodd 220 E 2nd St. Ashland

Recognizes National Board

An amendment to the Delaware medical practice act which was approved April 16 1917, provides that applicants examined and approved by the National Board of Medical Examiners will be licensed in Delaware without further examination on the payment of the usual reciprocity fee of $50 This is the eleventh state to provide either by board ruling or by an amendment to the practice act for the recognition of the certificate of the National Board of Medical Examiners The other states are Colorado Idaho Iowa, Kentucky Maryland New Hampshire North Carolina, North Dakota Pennsylvania and Rhode Island

Texas June Reports

Dr J S McCelvey, secretary of the Texas State Board of Medical Examiners, reports the practical and written examination held at San Antonio, June 27-29, 1916 The total number of subjects examined in was 12, total number of questions asked, 120, percentage required to pass, 75 The total number of candidates examined was 92, of whom 80 passed, including 3 osteopaths, and 12 failed, including 2 osteopaths Forty-eight candidates were licensed through reciprocity The following colleges were represented

PASSED

College	Year Grad	Per Cent
Howard University	(1916)	90 2
Rush Medical College	(1895) 88 2 (1914)	81 5
University of Louisville	(1892)	81 5
Tulane University of Louisiana	(1907) 75 (1916)	79 2 83 2, 85 5 85 5 87 5 91 2
St Louis University	(1916)	83 2
Meharry Medical College	(1916)	75 79 2 81 6 82 5 83 6 86 5
University of Tennessee	(1914) 84 5 (1915) 81 5 (1916)	84 5
Vanderbilt University	(1916)	84 89 5 90 5 91 5 92 5
Baylor University	(1916)	75 75 79 5 79 5 80 5 81 5, 81 5 83 5, 83 5 84 5 85 2 85 5 85 5 86 86 5 86 5 87 7 88 5 89 7
Fort Worth School of Medicine	(1916)	76 5 77, 82 5 84 5
University of Texas	(1915) 85 5 (1916)	75, 79 5 79 5 80 5 83 5 83 5 83 5 83 5 83 5, 84 2, 84 2, 84 5, 84 5, 84 7, 85, 85 2 85 2 85 5 86 86 86 7, 87, 87 5 87 5 88 5 88 5 92 5

FAILED

College	Year Grad	Per Cent
St Louis College of Physicians and Surgeons	(1914)	63 5
Meharry Medical College	(1915) 62 7 (1916)	71 7
Baylor University	(1916)	67 5, 67 5 69 5 71 72 5
Fort Worth School of Medicine	(1916)	70 5
National School of Medicine Mexico	(1906)	70

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
College of Physicians and Surgeons Little Rock	(1910)	Arkansas
University of Arkansas	(1902) (1912)	Arkansas
University of Colorado	(1913)	Colorado
Georgetown University	(1912)	Dist Colum
George Washington University	(1911)	Vermont
Atlanta College of Physicians and Surgeons	(1903) (1913)	Georgia
Atlanta Medical College	(1915)	Georgia
University of Illinois	(1915)	Oklahoma
Central College of Physicians and Surgeons	(1897)	Indiana
Louisville and Hospital Medical College	(1908)	Mississippi
University of Louisville (1893) Kentucky	(1911)	Mississippi
Bowdoin Medical School	(1897)	Vermont
Baltimore Medical College	(1904)	Arkansas
Michigan College of Medicine and Surgery	(1896)	Oklahoma
University of Michigan Homeo Medical School	(1888)	Michigan
American Medical College	(1902)	Kansas
Barnes Medical College	(1901)	Missouri
Eclectic Medical University*	(1915)	Arkansas
National University of Arts and Sciences	(1915)	Missouri
St. Louis College of Physicians and Surgeons	(1915)	Missouri
University Med. Coll Kansas City (1901) Kansas (1912) Oklahoma	(1911)	Missouri
Washington University	(1901)	Missouri
John A Creighton Medical College	(1915)	Nebraska
Bellevue Hospital Medical College	(1893)	Louisiana
University of Oklahoma	(1913) (1914)	Oklahoma
Medico Chirurgical College of Philadelphia	(1899)	Penna
Meharry Medical College	(1913)	Tennessee
Memphis Hosp Med Coll (1902) Oklahoma	(1910 2)	Tennessee
University of Nashville	(1905)	Tennessee
Vanderbilt University	(1913) (1914) (1915)	Tennessee
Baylor University	(1913)	Tennessee
University of Texas	(1913)	Missouri
Medical College of Virginia	(1914)	W Virginia
Faculty of Med Surg and Pharmacy Bahia	(1887)	Brazil
National School of Medicine Mexico	(1879) (1896)	Mexico
School of Medicine of Nuevo Leon	(1898) (1901)	Mexico

*College reported not recognized by the Missouri State Board of Health.

Arizona April Report

Dr John Wix Thomas secretary of the State Board of Medical Examiners reports the written examination held at Phoenix April 3-4 1917 The total number of subjects examined in was 10, total number of questions asked, 100, percentage required to pass 75 The total number examined was 14 of whom 11 passed including 3 osteopaths, and 3 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent.
California Eclectic Medical College	(1912)	75
University of California	(1916)	80 1
Rush Medical College	(1889)	74 3*
University of Illinois	(1913) 81 4 (1914)	76 8
Syracuse University	(1896)	70 6*
Willamette University	(1906)	75 5
Jefferson Med College of Philadelphia	(1911)	82 1

FAILED

College	Year Grad	Per Cent.
College of Physicians and Surgeons Bal	(1885)	36 2
Northwestern Medical College, St. Jos	(1894)	56 2
National School of Medicine Mexico	(1910)	57 4

*Credit allowed for years of pra

that the rewards of medical service are regulated by some power external to the physician himself As to what that power is, one need not long be in doubt

The call of the community as a whole for services of a particular kind and the relative amount of talent which can be directed to the performance of those services will, operating together, strike a balance which shall be the compensation that talent is to receive This principle of supply and demand is the essential factor operating everywhere to determine wages It frequently happens that the physician is urged to charge more for his services, by some one who, let us hope, knows more of physical than of social science The prudent answer to this alluring importunity is apt to be "Others will do the work for such a price, how dare I ask more?" This reply shows a conception of the most obvious factors in the regulation of wages in general, and implies, what never should have been doubted, that even the high duties of the physician come within the purview of economic law

Let him think twice who is about to disregard this law of wages If a physician asks more for his services than do his fellows, he must justify his charges by assuming an attitude of superior learning and abilities which are presumed to place him above the plane of competitive activity Unsupported pretensions will not long endure Unless one's endowments are genuinely and ostensibly appropriate to one's claims, it were better not to try the hazardous experiment

Such an experiment is being tried by those audacious physicians who charge an extraordinary fee for the examination of a patient with a disease that is to be treated by surgical means In doing so the physician not only violates the custom of the community relating to medical fees, but, probably, the precedents established by his own example Having made other examinations as extensive or even more so for the customary fee, it will be difficult for the patient to understand why, when the unusual expense of a surgical operation falls on him, the cost of his examination should rise to an extraordinary sum

The diagnosis of diseases of the nervous system and of those organs within the chest demand medical attainments of a high order Consider how many senses are employed in the examination of the heart and lungs the revelations of sight, the many appeals to the auditory sense as one listens to the heart sounds, the breath sounds, the voice sounds, and the many adventitious sounds, add to this the fine gradations of the percussion note and the beautiful way in which the facts revealed by one sense are verified by another Yet these are but hints of the admirable refinement to which diagnosis in this region may be carried Any one watching a skilful physician examine the chest or nervous system could hardly fail to be impressed with the dexterity with which the investigation is conducted and with the number and import of the facts which it reveals The diseases so discovered are rarely treated by surgery The fee for the examination must, therefore, rest on its own merits It may rarely be augmented from a part of a surgeon's fee It is, as might be expected, comparatively low and uniform

The diseases of the abdomen present a strange contrast to those just mentioned The diagnostic methods used in discovering them are the crudest of those in use in any part of the body With a little sifting of significant events from the history of the disorder, and a little palpation for stiff and tender places, the deed is almost done If the disease turns out to be a transient disorder of digestion, the attendant would not dignify his examination with a name He sends his bill for the call or calls made If, however, the point of his index finger happens on tenderness and rigidity midway between the anterior superior spine of the ilium and the umbilicus, that which before was but casual inquiry suddenly becomes an examination of high financial dignity

How is this obtrusive inconsistency to be explained? Even though the bill for such an examination is paid without apparent reluctance, suspicion must still lurk in the patient's mind The coveted relation of fidelity and trust between physician and patient has received a severe strain, if it has not snapped asunder In the common attempt at justification of this unusual fee, a certain case is imagined from which the facts for mental experiment may readily be derived This case is usually appendicitis of a character which, without surgical treatment, would prove fatal, but which, with an operation, results in complete recovery The operation having proved a life-saving measure, the surgeon's service has been of the highest conceivable utility The surgeon is justified, so it is contended, in charging for his work the highest price which the patient can be expected, within reason, to meet The physician, too, has played no small or unessential part in accomplishing this great purpose His recognition of impending danger and his timely alarm were necessary parts of the life-saving process He is, then, according to the same principle, entitled to a share in the high award He must receive his compensation from the surgeon, or, if that should be adjudged questionable practice, he must make an independent charge for his diagnosis and direction

To this reasoning the just objection should be made that comparatively few surgical operations are life-saving measures The illustration cannot, therefore, represent all cases in which large fees appear But the crucial question is this "Does the value[1] of a commodity or of a service depend on its utility?" The answer is short, unanimous and decisive "Never" Air and water are necessary to life They are of the greatest possible utility Neither has value Yet it is possible that in the midst of a desert a drink of water might command the highest price compatible with the wealth of the purchaser To have value, a thing must be so limited in quantity that there is not enough available to satisfy the demand for it It is difficulty of attainment which gives value to useful things

It is a familiar fact that the services of physicians may be secured at moderate prices Not only do others offer their counsel at such prices, but in all probability the physician in question has set his own price and example Look at it as one may, this plan of deriving unwonted profit from surgical cases cannot be shown to be justifiable or expedient It cannot be continued without entailing ultimate loss to the physician and distrust of his profession In spite of the most vigorous and eloquent exhortation to adopt a higher rate of fees, the services of the physician will be determined by those relentless agents which fix the reward of every kind of effort that is subject to competition

This consideration of the nature of the physician's fee and of the factors acting toward its determination will make easier the study of the financial returns for surgical activity It has cleared the ground of several confusing circumstances It will show by strange contrast that what is of dominant influence in the one is but faintly perceptible in the other That the fee of the surgeon is due to the utility of his work, to his great therapeutic power, may be dismissed at once in view of the very brief glance which has been permitted of the nature of value

The cost of surgical operations maintains a close relation to the wealth, income or earning power of the patient One of the largest surgical clinics in this country has a well-organized bureau for ascertaining the financial standing of those who apply at that clinic for treatment, the motive being the adjustment of the fee for operation to the means of the patient It will hardly be questioned that this practice is general and not limited to persons and places The fee must, therefore, vary greatly, being low in some cases and of opulent proportions in others That which depends on the wealth of the patients cannot also depend on the subtractive influence of competition Both the nature of the surgeon's fee—its irregularity—and the chief fact which enters into its determination—the wealth of the patient—show that competition does not sensibly affect it

Any industry which is not affected by competition is, necessarily, a monopoly The word "monopoly" signifies unified control over a certain commodity or a service That the surgeon's fee is monopolistic in character is verified by the following incidents. The physician sometimes asserts that he is entitled to a share of the surgeon's fee because he might have sent his patient to whom he wished. The selection of a particular surgeon is a special mark of favor. And gratitude if nothing else, should prompt generosity. To this the surgeon replies that however benevolent the motives on both sides, such a transaction amounts to the selling and buying of patients. Now, that is not bought which cannot be delivered, therefore in both statements there is implied the absolute control of the physician over the patient. If the physician endowed with such authority acts with the surgeon, both as one man, in keeping the patient under the care of either, a monopoly is undeniably established.

---

[1] Value is here used in its economic sense of the desirability or worth of a thing as compared with the desirability or worth of other things If a thing cannot be sold or bartered for other things it has no value but still may be highly useful

If further proof were needed, it will be supplied by noting that monopoly signifies such control over certain articles or services as will make it possible to raise their prices higher than the level of prices fixed by free competition. Monopolies naturally, aim to secure the greatest net profit. The price which will yield this profit is monopoly price. It is a maximum price. There can be no other purpose in ascertaining the financial resources of the patient than the fixing of a maximum price for his care. This does not mean that all the patient has is to be taken from him. That would not be a maximum price. It means that as much will be taken as will prove at once profitable and in no way detrimental to the business. The determination of such a price is always a delicate mathematical exercise. The patient must be dismissed satisfied, as it is desired that he should come again if in need of a similar service, and that he should commend his attendant to others. Were the price too high, the patient might decide to bear his ills rather than fly to others, poverty being among them. He might, too, look abroad for other and more economical sources of help, in which event competition would arise.

It has already been stated that an essential characteristic of value is difficulty of attainment. In the majority of instances the difficulty of attaining a thing is conditioned, largely on the amount of labor required in its production. The output of a monopoly bears the value which labor imposes on it together with that increment made possible by the exclusion of competition. If now one accepts the proposition so invariably advanced by those who inveigh against all manner of fee division, namely, that wealth should go to its producers or that what one earns one should get, no more and no less, the surgeon's fee should be distributed in this wise. All that amount of money which arises from labor, allowance being made for those abilities native and acquired, which were exercised in the case, should go to the surgeon. All that money arising from monopoly should be divided among those forming the monopoly in proportion to their services therein. If this division is not made it will be the surgeon who has received and kept an unearned increment, a practice which he has justly denounced as being immoral and beneath professional dignity.

When the physician sees clearly what he has hitherto but dimly discerned, that he is an agent in the creation of the surgeon's fee, he will either insist on its division, or he will refuse henceforth to cooperate to the surgeon's sole advantage. Human nature does not justify the hope that he will be content to sigh with Virgil "It is not for yourselves, O bees, that you make honey."

Were the argument to end here, this paper would be taken as an attempt at justification of fee division. But is it really so? Have we not been asking and answering the wrong question? The inquiry we have addressed to our conscience is "Should the surgeon's fee be divided with the physician referring the patient?" The question we are now called on to answer is this: "Is it justifiable for the physician and surgeon to enter into collusion with the motive of excluding competition from other capable men when such united action entails increased expense to the patient?"

It will probably be hard to find any one who would answer this question in the affirmative, whatever might be inferred from one's professional conduct. When the conscientious physician has seen his relation to the surgeon as this paper has attempted to reveal it, and a patient presents himself with a disease properly treated by surgical measures, the physician will write down the name of every man in the community capable of doing such work and deserving of such trust. With this guidance the patient will be able to consult with any one or with as many as he may wish. When such a plan has been adopted, what will happen to the surgeon's fee? Will the surgeon still inquire how much the patient has or will he wonder what was the figure of the lowest bidder? Will any one need to explain to that patient where his money went?

The patient has two concerns respecting his operation: first, what service he is to receive, and next, what price he is to pay. Every possible effort has been made throughout the history of medicine to make it of greater and greater service. There has been no inattention to the first of the patient's wants. Toward the second we have been both imprudent and unjust. At one extreme we have been too charitable, at the other too covetous. The purpose of this essay is to make the way clear along which both of the desires of the patient may be satisfied—a high service and a low fee.

CONCLUSIONS

When the relation between the physician and surgeon as at present maintained is clearly understood, some form of fee division will be an obligatory consequence.

The pledge of the American College of Surgeons encourages this relation while attempting to suppress its results.

Fee division will cease when patients are referred in an impersonal way to any one capable of doing the required work and when the surgeon's fee has been reduced and, in a measure, standardized by competition.

550 Metropolitan Building

Work of the Municipality in Industrial Hygiene

The *Monthly Bulletin* of the New York Department of Health devotes a recent issue to a discussion of this subject. The first annual report of the division of industrial hygiene is published and the various activities of this division described. Placards giving precautions have been prepared for the fur and hatter's fur trades. There have been distributed among union painters 10,000 copies of a questionnaire outlining the principal signs of lead, turpentine, wood alcohol, benzin and benzene (benzol, C_6H_6) poisoning and urging the necessity of consulting a physician or the occupational clinic staff if there appears reason to believe that any form of occupational disease exists. Health suggestions for bakers are now ready for printing and appropriate advice on health matters is being prepared for other trades. Over twenty-eight lectures on industrial hygiene have been delivered before various medical societies, civic organizations, labor unions, public schools, etc. Addresses have also been made before various manufacturers' associations. The occupational clinic during its first year of active work has examined 8,912 bakers, 8,236 pedlers, 23,440 waiters, cooks and other food handlers, 886 furriers, 225 painters, 110 trade school girls and 203 employed in other industries, making a total of 42,042. Since the examination of all food handlers was an undertaking requiring a much larger force of physicians than were available, private physicians were given permission to conduct such examinations. During a period of nine months 1,196 physicians examined 33,700 persons. Among these, 8 cases of tuberculosis with positive sputum were found, and 17 doubtful cases and cases of clinical tuberculosis without positive sputum, only one case of active syphilis was found, there were 68 cases of latent syphilis and 6 doubtful cases in which the Wassermann test was refused or the person failed to return for probation inspection. There were 8 cases of acute gonorrhea, the persons being excluded from work. Four typhoid carrier suspects were found. The twenty clinic physicians examining 23,440 persons found 30 cases of tuberculosis with positive sputum and 79 doubtful cases in which the Wassermann was refused and the person failed to return, 22 cases of active gonorrhea and 4 typical typhoid carrier suspects. Two branches of the occupational clinic have been established in the Bronx and Brooklyn respectively.

Medicolegal

Disclosure of Confidential Information

(Smith vs Driscoll et al (Wash), 162 Pac R 572)

The Supreme Court of Washington affirms a judgment which dismissed, on a demurrer to the complaint, this action against the defendants, licensed and practicing physicians and surgeons who were sued for damages for an alleged wrongful publication and disclosure of confidential information acquired by them in their professional capacity The complaint stated that they and each of them had as witnesses in a certain case in a justice court slandered the plaintiff by testifying over the timely and strenuous objection of the plaintiff, as to facts, information and communications having come to their knowledge in their capacity as physicians and surgeons, and gained in attending the plaintiff, such information being necessary to enable them to prescribe for him The court says that it will not go into the question of whether the action was improperly designated as one for slander, for, if the facts set forth in the complaint entitled the plaintiff to relief, it was wholly immaterial by what name the action was called Neither is it necessary to pursue at length the inquiry of whether a cause of action lies in favor of a patient against a physician for wrongfully divulging confidential communications For the purposes of what the court has to say it will be assumed that, for so palpable a wrong, the law provides a remedy The question presented was not the naked one of whether a physician is liable in damages at the suit of a patient for wrongfully divulging confidential communications, but Is a physician, who, while testifying as a witness in the course of a judicial proceeding, discloses confidential communications made to him, or professional information acquired by him, while prescribing for a patient, liable in damages to the patient for so testifying? This question cannot be answered categorically He may or may not be liable, depending on the facts of the particular case While the court has been unable to find any cases directly in point, the applicable principles of law are not difficult to discover To the ordinary mind it would seem that a physician, while testifying in a court of justice, is in the same situation as any other witness, and his rights and liabilities are to be determined by the same legal standards that are applied to a witness who is not a physician The court can conceive of no possible reason why the protection, which the law in the interest of a due administration of justice and on considerations of sound public policy places about witnesses generally, should

denied to a particular witness merely because he is a p
cian If this immunity is withdrawn in his case, surel
situation of the physician as a witness is not an enviable
If he is interrogated, and required by the court to an
concerning confidential communications in his profess
keeping, and does so, he will be rewarded for his obedi
to the law by being mulcted in d , the aggri
patient If, on the other hand, h it to be
paramount duty to preserve in its obligation
his patient and refuses to testify, h led for
professional loyalty by being comm Manife
no such barbarous rule would be to system
civilized jurisprudence While the vil l
bility of a witness for statements ma on
witness stand usually arises in cases is
reason to believe that the same immun
physician while testifying, subject tc
it may be said to be such Where a la
be held liable as for slander for defamat
while testifying in court, in addition
privilege of the occasion was abused, it
that the statements complained of were
while in an action against a physician
fidential information when testifying in the c
proceeding, it is necessary only to show tha
the witness was abused The important is
against a physician for divulging confidential

while testifying in the trial of a case is whether the testimony complained of was admissible in the case in which it was given and was relevant and pertinent to the issues The allegation in the complaint in this case invited the inference that the testimony was given in response to questions and in obedience to the ruling of the court, in which event the defendants would not be liable, even though the testimony were both inadmissible and irrelevant

Things a Physician by Implication Guarantees—Negligence in Treating Fracture

(Priestley vs Stafford (Calif), 158 Pac R 776)

The District Court of Appeal, Second District of California, in affirming a judgment in favor of the plaintiff, a child, for damages (amount not stated) for alleged negligence in the treatment of a fracture of the radius and ulna of his right arm, says that while in actions of this character the injury and the fact that it resulted from the professional treatment administered must be established, such finding standing alone will not justify a recovery of damages by a plaintiff On the part of a physician who undertakes the treatment of one suffering from disease or injury, there is no implied contract that such treatment will prove a success, or that ill and serious results may not follow as the direct result of such treatment While "not a warrantor of cures," he nevertheless by implication guarantees that he possesses that reasonable degree of learning and skill possessed by others of his profession, and that he will in the treatment of his patient exercise reasonable and ordinary care and skill in the application of such knowledge to accomplish the purpose for which he is employed And where he possesses such degree of learning and in applying it exercises ordinary care and skill, he is not liable for results that follow In this case, since the contrary was not made to appear, it must be conceded that the defendant possessed the requisite professional skill and learning But there was testimony of physicians which clearly tended to prove not only that the defendant was negligent by reason of the fact that he applied the splints and bandages in a manner which made no allowance for the swelling of the arm accompanying such fractures, but also that he was negligent when, on being informed within an hour after leaving the child that he was suffering excruciating pain and complaining that the splints were too tight, he did not remove the splints himself or have them removed, and likewise negligent, when he visted the child the following morning and discovered the condition of the hand and arm, in not removing the splints in order to relieve the undue pressure which was then apparent These facts, as well as

ers which the evidenc arly tended to establish, fully
orted a finding of t that the defendant, in treat-
the fractured arm intiff, did not exercise that
of skill and car exercised by the members
profession prac at and similar localities
the child's hanc were badly crippled and
d was conclusi and since it must be con-
the evidence on of the hand and arm
to undue pres by the f that the splints
ed in a m n for the usual
ompanyin s to whether
ission e for expert

dent Policy

o R 7'8)

udgment for
Bows, holds
ed against
olicy which
by complete
not entitled
the evidence
hand at or
the small
use or service

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION NEW YORK JUNE 4-8

American Academy of Medicine New York June 4-5
American Association of Anesthetists New York June 2
Am Association Medical Milk Commissions Brooklyn June 1-4
American Gynecological Society Pittsburgh May 31-June 2
Am. Laryn Rhin and Otol Society Niagara Falls Can June 1-2
American Proctologic Society New York, June 4-5
American Radium Society New York June 4
American Society of Tropical Medicine New York, June 4-5
American Surgical Association Boston May 31-June 2
American Therapeutic Society New York June 1-2
Assn of Am Teachers of the Diseases of Children New York June 4
Idaho State Medical Association Sandpoint June 25-26.
Maine Medical Association Portland June 12-13
Massachusetts Medical Society Boston June 12-13
Montana Medical Association Kalispell July 11-12
Oregon State Medical Association, Portland June 28-30
Washington State Medical Association Spokane June 17-19

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Eleventh Annual Meeting held at Utica April 24-26 1917

The president, DR MARTIN B TINKER, Ithaca in the Chair

Health Insurance

The Committee on Economics presented a report which dealt largely with health insurance. Those medical men opposing health insurance were thus grouped 1 Honest objectors who dissent on the questions of the principles involved in health insurance. 2 Objectors who are not questioning the underlying principles involved, but who fear a reproduction in America of all evils which foreign systems have shown obtain in the various foreign countries in which health insurance is in force. 3 Interested insurance men, or men who are helping the insurance companies either to defeat the proposed measure or cause a compromise between the insurance interests and the proponents of the measure so that private insurance companies may do business under the act. 4 Objectors who are considering neither public nor professional welfare but who fear that their own incomes may be damaged. They suffer no serious pecuniary damage under the proposed act because their private incomes from medical practice are now quite small but they see in this bill a chance to enlarge them and hence by combining with other objectors they are endeavoring to procure for themselves the best possible bargain. 5 Objectors who while willing to accept the principles and also the suggested outline of the medical organization are dissatisfied with one or more details of the plan and therefore condemn the whole question. 6 Finally the great mass of the profession which is uninformed as to health insurance and opposes the measure for the time being in an effort to gain time to inform itself regarding it.

Those favoring health insurance from a medical standpoint are grouped as follows 1 Those who do or do not believe in the principles involved, yet hold that it is a measure involving intelligent communal philanthropy which by levying a small general tax on the whole community will lighten a heavy burden now carried by a part of the community least able to bear it. 2 Those who believe it will mitigate the evils of lodge practice, and hospital and dispensary abuse. 3 Those who whether or not personally favoring it, still believe that it is the next step in social legislation in this state and honestly think that sooner or later and most likely sooner than it is realized some form of this type of legislation will be enacted into law. They firmly hold to the belief that under these conditions and with this situation confronting the medical profession it is best to favor the proposed legislation and to seek to modify the medical provisions so that the public welfare, and the economic condition of the profession, as well as the inherent interests of physicians in the maintenance of their high standards and in the advancement of preventive medicine may be safeguarded properly under the proposed legislation.

The committee feels that health insurance legislation is imminent, and in the effort to carry out its functions it suggests the following fundamentals as being necessary to safeguard all the interests concerned from the medical point of view

MEDICAL STANDARDS FOR HEALTH INSURANCE

1 The medical profession should be represented on the Health Insurance Commission. 2 On each subdivision of the administrative departments the profession should also have definite representation. 3 There should be coordinate representation in all administrative departments by the public health authorities without, however, any increase in the police power of the health department. 4 The entire profession should be eligible to positions under the act. All legally qualified practitioners of medicine should be eligible to the panels." 5 In the actual working of the law, provision should be made to separate the physician who treats the sick, and the physician (medical officer) who serves the funds or carriers as their official in determining the rights to cash or other benefits permitted by the fund. 6 The medical officer should be a legally qualified physician who shall have such other qualifications as the state medical advisory board may prescribe (this board being elected representatives from all the state medical societies) and who shall in addition be approved by the 'panel" physicians or their elected representatives. 7 A limitation should be placed on the number any given physician is called on to treat. This to be equally applicable whether the given fund uses the panel system, the salaried physician or a combination of these two systems. 8 Once the rate of remuneration for the panel physicians is determined the law should be made to read that when salaried physicians are employed, the salary shall in no case be less than the average sum of money earned by panel physicians in the same community. (This is to prevent the hiring of cheaper priced men to take the work from the panels.) 9 Absolutely free choice in regard to their medical attendant should be allowed patients. 10 In every community, especially in those in which the so called "closed hospitals" exist, the commission should either establish sufficient "open hospitals" or the carriers should be made to make contracts with enough open hospitals' so that no legally qualified practitioner shall be deprived of his right to continue to treat a patient whose removal to a hospital is imperative for any reason, the patient having chosen the given physician to treat him during the given illness. 11 The physicians on the panel should register themselves as general practitioners, surgeons or specialists naming their specialty in a manner and form to be determined by this society, so as to prevent illegal and unethical advertising, and to keep all on the lists on a given level of equality. 12 No individual contracts between carriers and funds and physicians should be permitted, except when salaried men are employed, and then the ideas given under Paragraph 8 are to obtain. All contracts should be made with the panels as a whole, and the panels should be empowered to enforce their contracts. 13 A standard of visitation fees should be worked out, promulgated and based on the prevailing rates of medical fees in any given community so as to give a reasonable annual income to physicians who elect to practice under the act. Such a standardization of visitation fees should not necessarily be written into the law, but should be the standard to govern the carriers and the physicians in making contracts. 14 In the case of committees having to do with medical matters and disputes between medical men, these should be composed of medical men. 15 The advisory board of the commission should consist of medical men elected in proportion to their numerical strength from all the state medical societies.

RECOMMENDATIONS

1 The committee again recommends that no action be taken at this time either for or against health insurance as a whole. 2 That the Committee on Economics be empowered to continue its conferences with the proponents of the health insurance measure to the end that the medical fundamentals and standards as enumerated above be embodied in the act

3. That this committee be further instructed to continue its efforts to elicit constructive suggestions and make a further report as more details are worked out, in the interest of this society. 4. That a tentative draft of an insurance law which conforms to the essentials and standards laid down above be approved, but that such approval shall not be construed as approving any specific bill before the legislature. 5. That in the event of a bill being introduced in the legislature, a specific study and report on the same be first submitted to the house of delegates before the society is committed either for or against such a bill. 6. That in the event of there being created in this state an official investigation commission on health insurance, this committee present to such commission the essentials and standards which this society regards as necessary to protect both the public welfare and the interests of our membership. 7. That there be added to this committee in an advisory capacity, and for purposes of closer cooperation, one member from each county society, selected by the presidents of county societies for such positions. 8. That for the purpose of closer cooperation, the chairman of the Committee on Legislation be made an ex officio member of this advisory committee during the time that health insurance matters are pending in the legislature.

Present Status of Drug Therapy

Dr. Warren Coleman, New York: A remedy which has been found useful by generations of physicians should not be discarded merely because its actions have not been subjected to the tests of a modern laboratory or necessarily when the experimental and clinical results are at variance. The experimental method may be lacking control quite as much as the clinical. The conclusions reached by different experimenters concerning the same therapeutic agent do not always agree. A consideration of the present attitude toward strychnin would serve to illustrate my meaning. A few years ago, opinion was practically unanimous that strychnin is a reliable cardiovascular stimulant. Today its actions are in dispute among both pharmacologists and clinicians. Dixon states that strychnin is an important cardiovascular stimulant. Sollmann denies that it has such action, except in subtoxic or toxic cases. Among clinicians, Cook and Briggs find that strychnin raises blood pressure in disease, but Cabot is unable to observe a rise. The preponderance of evidence derived from bedside studies with the sphygmomanometer indicates that strychnin does not, at least uniformly, cause a rise in blood pressure. On the strength of this evidence, many clinicians deny that strychnin possesses any value as a cardiovascular stimulant in disease. My criticism of this conclusion is that experiments lack proper control. The conclusion is based entirely on the assumption that to act as a cardiovascular stimulant a drug must increase blood pressure. I do not believe that this is true. The action of digitalis proves indisputably that it is not true, for digitalis, at times, may either not affect blood pressure or may cause it to fall. I have seen it fall 30 mm. In the face of conflicting opinions concerning the action of a drug, each clinician is compelled to depend on his own experience. My experience has led me to believe that strychnin is one of the most reliable cardiovascular stimulants. I am convinced, also, that there are characters in the pulse, discernible through the tactile and muscle sense, which no instrument of precision yet devised is capable of depicting. They are not the grosser changes that come early or late in circulatory failure, such as arrhythmia. They concern rather the tonus of the artery, the shape of the wave passing under the finger and the "push" behind the wave. It is characters such as these that are summed up in the word "quality."

Present Status of Physiologic Therapy

Dr. J. J. Levy, Syracuse: There has been a gradual drifting away from drug therapy in chronic conditions, and this has been due to the growth of sanatoriums, in which drugs play an inferior role in treatment, and the physical agents are the important therapeutic aids. Several advances have been made in the past few years which merit attention: 1. Psychanalysis in the treatment of nervous disorders. 2. The work of Cannon, who has shown that depressive emotions, such as anger, fear and grief, cause excessive stimulation of the endocrine glands through the sympathetic system. This chronic emotional stimulation is an important factor in the causation of many of the chronic disorders, and must be considered. 3. Use of the physical agents in the after-treatment of fractures, especially in the treatment of adhesions resulting from trauma. There is bound to be a wonderful future for physical therapy on account of the compensation act. 4. The use of the gamma rays, especially in many gynecologic conditions of a nonmalignant nature when there is an excessive uterine hemorrhage, and in the treatment of fibroids. 5. Disappearance of the old idea that we are merely to treat cases with drugs, and the use of the physical agents, such as fresh air, sunlight, proper diet, mechanotherapy and electrotherapy, which are bound to play a more and more important part in relieving and alleviating the sufferings of humanity.

DISCUSSION

Dr. L. F. Bishop, New York: I think the older practitioners have not been willing to take up physical methods, especially in the treatment of chronic diseases. Dr. Levy has called attention to the fact that the compensation act has stimulated the efforts of physicians to get their patients back to work. That is true. We must not try to seek any special method of treating these patients but a combination of methods, a sum of a great many different methods. Diet, for instance, is of prime importance and it should be considered more carefully.

Dr. Mary E. Rose, New York: I am interested in vaccine therapy. I should not wish to treat a case of leukorrhea unless vaccines were used as an adjunct.

Dr. W. Dewey Alsever, Syracuse: One great difficulty which we encounter is in attempting to get the pharmacologists and physicians together. There should be more cooperation. One makes bedside observations and the other makes observations in the laboratory, which, of course, leads to many errors. With regard to strychnin, many men have for years believed it to be a cardiovascular stimulant. Dr. Coleman says this is not the case, except in toxic conditions. Strychnin is a powerful stimulant of the nervous system.

Dr. John M. Swan, Rochester: I must disagree with the statement of Dr. Rose. She should not treat the leukorrhea but the woman who has leukorrhea. There is a tendency for medical men to prescribe medicines without having made a most careful study. They should not prescribe anything except when in their judgment the agent seems capable of producing good.

Dr. J. O. Stranahan, Rome: In a case of streptococcic infection of the throat, I advised the use of active strains of vaccines, and obtained most gratifying results.

Carrel-Dakin Treatment of Infected Wounds

Dr. C. L. Gibson, New York: The Carrel method of wound irrigation requires intelligent attention to every detail. Bacterial destruction is accomplished by the reaction on the proteins of the body. The application of the solution must be constant and prolonged. Unless administered frequently, it disappears. In experiments in using the solution in one half of the wound, the half in which it is used rapidly clears up, and the bacterial count diminishes. The solution is dangerous if introduced into the circulation, causing rapid hemolysis, and it is necessary to make a careful hemostasis. It should not be introduced into deep wounds in which there is fear of its entering an artery. Irrigation is practiced every two hours. The skin can be protected with cloths containing yellow petrolatum, and the tubes are changed according to the condition of the wound. The average wound becomes sterile in ten days. There are no constitutional symptoms and the bacteria diminish steadily. In eighty compound fractures, not one suppurated. Great care is observed in the preparation of the solution, which depends on the titer of the chlorinated lime, the other ingredients being in accordance with this titer. If the solution irritates at all, it is wrongly made.

DISCUSSION

Dr John Van Duyn, Syracuse There is nothing new in the method, except the scientific application of it The only new point is the late closure of the wound Success depends on appreciating all points of technic, getting the solution over every part of the surface, and having the solution pure With repeated practice and patience, the results can be obtained

Dr Henry H M Lyle, New York The method seeks to sterilize the wound by chemical means, the response of the tissues and bacteria on the surface to the solution The flow of the solution, per se, dissolves out the tissue. It is not a continuous reaction but delivers a definite chemical to every portion of the wound The key to complete success is gentleness and thoroughness, in other words, good surgery In the American Ambulance Hospital there was a drop in mortality of 11 8 to 7.8 after the use of the method There is an economic side, it cost $2 per day per wound, and if the wound can be healed in twenty days, instead of three months, the advantage can be appreciated

Dr Albert Vander Veer Albany My experience in military surgery began in June 1862, at the Battle of Richmond It was hot weather and wounds were not dressed for four or five days The difficulties of military surgery under such conditions are great We made wide incisions and washed the wound with such preparations as were recommended at that time, and after eighteen months' work, a solution was provided for the surgeon for keeping the wounds clean. It was called Labarraque's solution of chlorinated soda, and it was the best preparation the army had What is the real difference between Labarraque's solution and Dakin's neutral solution of chlorinated soda? If the wound has been dressed, how often has the dressing to be removed? I have heard that with the continuous irrigation the dressings do not soil and the wound is kept quiet. That point was appreciated in the last eighteen months of the Civil War The wounds were kept quiet. In amputations silk ligatures acted as drainage tubes Suppurating wounds were dressed twice a day, and handling of the wound was distressing A free incision with washing by Labarraque's solution was the best treatment, and wounds healed under this method

Treatment of Syphilis of the Brain and Cord by Subdural Injections of Salvarsanized-Mercurialized Serum

Dr. S T Nicholson Clifton Springs Fourteen patients with syphilitic infection of the central nervous system have been treated by subdural injections of salvarsanized-mercurialized serum, nine with tabes dorsalis showed marked improvement Two patients with paresis did not do well, in two cases diagnosed as cerebrospinal syphilis, the patients showed improvement and a third patient discontinued treatment too early to permit conclusive observations One of the most striking features in reviewing these cases was the difficulty of getting the patients to return for observation and treatment until the beneficial results as evidenced by the laboratory findings were as satisfactory as the functional improvement In the interstitial type, in which there is gumma formation the most rapid results as regards functional recovery were obtained The methods of choice of intraspinal therapy are (1) the salvarsanized serum of Swift and Ellis (2) the Ogilvie method, and (3) the Byrnes method I have used the first and the third combined, and the results have been so encouraging that I shall continue the method The treatment is elastic and may easily be adjusted to the individual problem presented by each case. The mercurialized serum is a stable product, and may be used at any time after its preparation Pain, muscular spasm, nervousness, headache, ataxia and reduced or lost sphincter control have all been relieved in full or in part, but by far the most important result is the possibility of restoration of some of the patients to their active pursuits of life.

DISCUSSION

Dr Malcolm S Woodbury, Clifton Springs None of the patients treated by this method have shown any severe reactions I have known of instances in which quite severe reactions have followed the subdural use of medicaments The paretic patients have not done well

Dr Henry Lyle Winters, Cornwall My experience has been somewhat similar to Dr Nicholson's Good results are obtained in the active syphilitic processes I have been able to arrest the progress of the disease in 75 per cent of perhaps thirty cases treated in that way In early tabes cases I have not been so successful

(To be continued)

CHICAGO INSTITUTE OF MEDICINE

Meeting held March 30 1917

Psychanalysis and the Practice of Medicine

Dr William A White, Washington, D C—See The Journal, this issue, page 1591

DISCUSSION

Prof James R Angell, University of Chicago Dr White has given you so persuasive and reasonable a statement of freudianism that I somewhat hesitate to read a document which I have brought with the purpose of suggesting one fairly common view of the movement May I say that Dr White has just published a book, "The Mechanism of Character Formation," in which he has embodied many of the same views that he has set forth so interestingly this evening His book is the sanest and most lucid exposition of the conceptions of psychanalysts that I have met I venture to read a few sentences from an article by the celebrated biologist, Yves Delage (*Journal of Mental Science*, January, 1917, p 61)

> In the event of a contagious malady making its appearance in any country it is the duty of the medical man who first has cognizance of the evil to raise a cry of alarm so as to ensure the adoption without delay of the necessary prophylactic measures
>
> To sound this note of alarm is the object of this article.
>
> This new affection which threatens to invade France, had its birth in Austria in Vienna, some twenty years ago
>
> It is a malady without any apparent lesion of the central nervous system, a purely psychical affection in a word a psychosis Its name coined by the very persons who are its victims is *Psycho analysis*
>
> Psycho analysis, defined in the most general terms is an affection in consequence of which the unfortunates who are attacked by it become incapable of accepting just for what they are the most insignificant gestures the very simplest acts the most banal words of persons with whom they have intercourse in everything there must be discovered some profoundly hidden meaning The detection of this pretended hidden meaning becomes for the patient a veritable obsession
>
> Like all madmen the psycho-analyst lives in an imaginary world, which it is necessary for us to recognize in order to understand what goes on within him
>
> Reader what is your opinion?
>
> I am of the opinion, you will answer that there is no outrage on the most elementary common sense which psycho-analysts are not prepared to perpetrate in their efforts to square the very simplest and clearest facts with their preposterous notions

Without pursuing further the quotations, you will probably agree with me that the conservative statement which we have heard this evening is perhaps freudianism at its best I understand psychanalysis already to have reached a stage at which it has begun to subdivide into cults and schools, so that it is no longer possible to say anything about it which shall be in any universal sense true. Freud himself has changed his views has grown and developed His disciples have likewise changed their views, and any attempt to evaluate the movement as though it consisted of a single body of well organized opinion is impracticable

I understand by freudianism partly a theory of the nature of the psychic organism and partly a system of therapeutics On the therapeutic side I should hardly dare to express myself I hazard a single comment in passing If one is to judge psychanalysis by its *results* it is reasonable to bring it into context with other methods which dealing also with the same specialized group of diseases, demand that they be judged by their results and not by their antecedent medical history While the context is in some way unfair and superficial, if one is really turning to results for a criterion, one may well ask whether Christian Science and mind cure and chiropractic and osteopathy and suggestion and hypnotism and psychic reeducation and all the other things which have had more or less vogue in the treatment of nervous disorders may not lay equal claim to success. Frankly, I do not pretend to know what the answer is—whether the freudians' successes are more readily gained, or are more permanent, or whether they cover a wider range of cases. But I am disposed to think that the question suggested has some propriety.

Let me pass at once, however, to the few comments I have to make on the other side of the question, i. e., freudianism as a psychology, and more particularly its relation to other current psychologic beliefs.

I wish to speak first of a thing for which I think psychology greatly indebted to freudianism. I believe Dr. White did not speak about dreams in his paper. But it is a statement of the most obvious fact to say that freudianism has taught modern psychology that the dream is an absolutely significant and fundamental part of the psychic life of the individual, a thing which psychology prior to Freud had never in any frank, thoroughgoing way acknowledged. We had had all sorts of studies of dreams, but they were mostly on the descriptive level, and beyond affording a theory of the stimuli provoking the beginning of the dream, they had little to offer. They were, as a rule, wholly uninterested in the course of the dream or in its interpretation. I am far from wishing to imply that the freudian type of interpretation is altogether acceptable, but there is a rapidly growing conviction that the analysis and interpretation of dreams presents a very real problem to our psychology. In passing it will not be overlooked that psychanalysis applied to dreams is at least as old as Pharaoh, for it will be remembered that that eminent potentate had his dreams analyzed by a distinguished expert with disastrous results.

We are also under some obligation to freudianism for again turning our notice to the far prehistoric past of man as bearing essentially on our conception of how the mind has come to be what it is. From one point of view it is, of course true that this idea has been a commonplace ever since we learned to think in spencerian and darwinian terms. We have come to believe that you cannot understand the mind of living man today without recognizing that it has in it changes which are not only prehistoric but prehuman. Nevertheless the freudian has thrown a new light on the conception and has enabled us to take a more plastic and flexible view of the makeup of the individual than was heretofore the case. It is no more than fair, therefore, that we should acknowledge our indebtedness. We may also be allowed to voice a mild protest against the extravagant claims of certain freudians as to their originality in this matter.

So far as concerns the antiquity of man's psychic past, our modern notion is not so different from that of the freudian as might be supposed. It has been a familiar teaching of our psychologic textbooks for many years past that every individual brings into the world with him a heritage of animal instincts, appetites and tendencies which in part reflect his descent from the race as such, and in part are due to peculiarities which may have become established in his own particular family stock. We have also come to recognize that there is mentally, as well as physically, an element of variation in every individual which comes to the surface in impulsive traits—tastes, prejudices, wishes and the like—which enjoy much the same kind of imperious claim over his attention as do those tendencies which derive more obviously from the common racial stem. Moreover, we have been for several generations thinking of the evolution of mental processes in the individual as taking place about systemized ideas and forms of reaction which at once suggest the freudian complexes. These ideational systems grow up as centers of control in childhood and adolescence, and in maturity constitute the great groups of attitudes by which we maintain our social equilibrium. Underneath them all is ever to be discerned the foundation of instinctive impulses to which I have referred above. A serious disturbance in these impulses either in the way of undue repression or in the way of exaggerated growth is sure to be reflected in disturbances of the social attitudes and of the intellectual life.

The exploitation of wish fulfilment, or the "libido" which the freudians generally indulge, if taken in its earlier form as intrinsically synonymous with purely sexual impulses, has seemed to most psychologists grotesquely one-sided. When enlarged to take in all the basic appetites of life, as in later freudian writings appears to be the disposition, the doctrine either becomes substantially synonymous with the common views described in the preceding paragraphs, or it thins out into a formula so general as to be incapable of either proof or disproof. Modern psychology has given quite as central a place to emotion as has the freudian, and in the movement headed by William James, the identification of emotional with instinctive behavior is substantially complete. The types of disturbances, therefore, which freudians find originating from thwarted wish fulfilment, so far as these wishes are incorporated in emotional experiences, are easily assimilated to the conventional psychologic views, and, so far as concerns their theoretical implications, are in no sense radically novel. Psychologists are quite ready to recognize the wide reverberation of the sexual impulses in the psychic life of the individual, but they have not for the most part been at all ready to accept the earlier and more extravagant formulations of the freudians tending to make this group of impulses absolutely predominant over all the others. Hunger and thirst, anger and fear to mention no other items, all figure in primitive behavior in a fashion clearly distinguishable from purely sexual considerations, and any one may readily be implicated in disorders of the psychic life of the individual. To leave out these factors, or to slur them in the way in which freudians have sometimes done, has seemed to psychologists to involve a distortion of the true conception of the psychic organism.

There is another matter on which Dr. White did not dwell although it is admirably set forth in his book, that deserves consideration in this matter, namely, the freudian notion of symbolism. No doubt you are aware how fundamental symbolism is to the freudian conception of the dream structure. You also know how, in the analysis of dreams the psychanalyst distinguishes between the "manifest content," the thing we common-sense individuals are confronted by when we hear a dream described or face one of our own and the symbolic implication of the dream. We are told that only when we get the true symbolic clue can we understand what the dream really means. This assertion hangs together with the conception of the dream as a device for relieving repressions and permitting suppressed wishes to come into the mind in this veiled and roundabout fashion.

It is quite out of the question in the limited time here available to enter with any thoroughness on this matter. Suffice it to say, that in a certain sense our conscious processes are all fundamentally symbolic. Language, the great medium of thought, is nothing other than an elaborate system of symbols. One does not need to turn to dream consciousness to verify the reality of the symbol as a feature of mental operations. What psychologists of the nonfreudian stripe have objected to has been the utterly weird and uncontrolled interpretation of dreams under the freudian methods of analysis. The point is not that we are always in a position to prove the falsity of the alleged freudian symbols but that we are by no means bound to accept the wholly inconclusive evidence which the freudian himself frequently offers for his own symbolic interpretation. Not even his ingenious search of the obscenities of primitive religious rites and practices has brought conviction to the rank and file of psychologic onlookers. Moreover there is more than a little ground to suspect that just as in the "Salpetriere" Charcot succeeded in unconsciously establishing a group of apparently real but actually artificial hypnotic states so the freudians are by their own procedure unconsciously generating a uniformity of symbolic interpretation which has little or no real convincing evidential basis.

Another interesting freudian device, the censor, Dr. White also passed by in silence. The censor is the freudian "god from the machine." On his behalf apparently is established the unbelievably elaborate system of symbols, by means of which he is coaxed into quiescence while these scapegraces pass out from the field of repression into the open pastures of the dream. Who he is, where he comes from, whether he is anything more than the accumulated moral habits of th [illegible] vidual—these and many other interesting questions about him are left unanswered Meantime, he presents all the external characteristics of the medieval witch

In conclusion, I should like to comment briefly on one remark which Dr White made in referring to the impossibility of securing a just impression of mental conditions under the ordinary procedure of the psychologic tests of the laboratory It is quite true that our present forms of laboratory procedure are in some particulars ill adapted to the purposes of the alienist But it would be wholly misleading to imply, as I think Dr White perhaps unwittingly did, that all laboratory forms of procedure lack practical value Nobody who is familiar with the wide range of applications now being made in our laboratories and elsewhere of the principles of psychology to the practical problems of education business and industry can for a moment accept any such implication Moreover it should not be forgotten that the most revolutionary contribution which has been made in recent years to the study of mental retardation and mental deficiency in children is the contribution of a psychologist, Alfred Binet and rests on distinctly psychologic methods I venture to believe, therefore that while in general it may be true that the psychologic laboratories are at present largely working on problems whose solutions do not contribute immediately to the interests of the alienist, it is wholly beside the mark to deny to them very large contributions of a practical kind to modern enterprises of various sorts and in general I think it may be fairly said that the actual procedure of the psychanalyst will be found to have been in considerable degree borrowed from the extant ideas and practices of our conventional psychology

Dr Ralph C Hamill Concerning the role of symbols, I shall report several cases which clear the situation a little [Dr Hamill reported analyses of three cases] Dr White spoke of the habit of taking things to replace others At one time Dr Healy at the Juvenile Court worked on this among many other things [Dr Hamill then reported a case of kleptomania with analysis] If we did not follow up the symbols in the analysis it would be a tremendous waste of the evidence that is offered to us We are criticized for using them and told that they may mean anything, that may be true but if we do not use the material which is offered, we certainly cannot expect to succeed

Dr Hugh T Patrick That the majority of the most highly educated practitioners neglect the psychic factors in sickness is only too apparent to me They make all the laboratory tests but so far as the vital life of the patient is concerned content themselves with a few superficial questions about overwork, worry etc. They cultivate an intimate aquaintance with his organs and fluids but do not know the man himself his total character with all his passions, desires, fears his susceptibilities his attitude on duty religion love, health heaven and hell and this is simply the human animal plus the resultant of his reactions, all the influences which have been brought to bear on him certain of which we call abnormal because they are occasional How are we to understand a given one and handle it intelligently unless we find how it came about? The question whether or not psychanalysis is the best way to find out and also the best way to treat the trouble has not yet been answered to every one's satisfaction The value of any therapeutic procedure cannot be affirmed and estimated on *a priori* grounds but only by intelligent comparison of its results with those of other methods Consequently psychanalysis is not to be determined by psychologic investigation A man who has not used it cannot know whether it is better or worse than methods he has been using and the psychanalyst who does not understand the older methods has no grounds for evaluating his procedure This brings me to my personal feeling if I am entitled to an opinion being neither a psychologist nor a psychanalyst, but an old style practitioner

1 A good deal of psychanalysis is intelligent, painstaking and detailed history taking This, I am convinced pays In many cases after the patient's confidence has been secured it pays to ask leading and intimate questions That I presume Dr White would repudiate as a process of psychanalysis but I do not repudiate it as a practical procedure

2 There can be no doubt that experiences the patient has forgotten are of importance in psychanalysis Probably something the patient has not forgotten is overlooked because it has no apparent connection with the psychic disorder, and the doctor does not dig it out.

[Dr Patrick gave some details of a case in which the chief thing the patient complained of, after some quizzing, was several forms of agoraphobia The patient was nervous and apprehensive, and did not wish to call on her neighbors and friends or have them call on her There was a dread about seeing them come and she felt like running away She was leading a decidedly uncomfortable life The development of the minute details of the history of the case revealed a terrible sex trauma at one time in the patient's life, which seemed to be at the bottom of her difficulty, and an explanation on that ground cleared up the symptoms]

3 Libido I think this might be called in a rough way a longing for the happy life "Be good and you will be happy" is an old admonition To many of us, "Be happy and you will be good" is quite as applicable Could we at one stroke make the world happy we should have a better and healthier world Each one has an inherent hunger for something more than food and if that is not gratified we react some way in the way of some nervous disease

4 The statements of patients are to be discredited for three reasons First, they may have forgotten essential things, second, they suppress things they should give you, third, they may not be fully conscious of present states of mind For instance, a patient will honestly, vigorously and emphatically deny fear, jealousy unsatisfied desire of some sort, when such a state is not only present, but intensely so

5 One final simple point which I believe is sometimes overlooked by psychanalysts as well as by others By means of psychanalysis the old suppression and substitution are laid bare, the patient sees how the symptoms come about, sees the process and understands it as the physician does, he is satisfied and hence is cured But is he cured because the true explanation has been given him? Not at all He is cured because he believes or feels that the true explanation has been given

Quite recently a colleague said, "The work of a medical expert is exceedingly simple and easy All he has to do is to tell the truth or, failing to tell it, convince the jury that he is telling the truth" The psychanalyst or the ordinary physician may present the patient with a true analysis of his disorder but if the explanation does not completely satisfy him he is not cured On the other hand, a quack or a Christian Science healer may give him some spurious logic which appeals to him and he is cured

AMERICAN ASSOCIATION OF IMMUNOLOGISTS

Fourth Annual Meeting held at New York April 6 7 1917
(Continued from page 1578)

Absorption of Foreign Protein by Anaphylactic Tissues and Hepatic Reaction in Anaphylaxis

Drs W H Manwaring Stanford University, Calif, and H E Crowe In a sensitized guinea-pig if the lungs are repeatedly perfused with 1 per cent foreign serum, diluted with Locke's solution or 50 per cent. defibrinated normal blood the lungs show typical anaphylactic reaction Quantitative titrations of the perfusion fluid furnish no evidence of absorption or appreciable amount of foreign proteins by the anaphylactic tissues, or of destruction by blood enzymes If 1 per cent goat serum in 50 per cent. defibrinated normal blood is repeatedly perfused through the liver of a normal or of an immunized guinea-pig, a slight reduction in the toxicity of the perfusion fluid is usually observed on subsequent test with the isolated anaphylactic lungs The detoxicating action of the normal or immune liver is not sufficient to render the perfusion fluid nontoxic Perfusion made through the anaphylactic liver makes the fluid nontoxic for the anaphylactic lungs This nontoxicity is not accompanied by quantitative decrease in the amount of goat protein in the prefused fluid The detoxicating action of the anaphylactic liver is, therefore, due to the explosive liberation of an antianaphylactic hepatic internal secretion

The Specificity of Intracutaneous Absorption

Drs G H Smith and M W Cook, Glen Olden, Pa When both specific and heterologous antigens are injected into the cutaneous tissues of immunized, sensitized and normal guinea-pigs, the specific antigen is absorbed from the tissues of the immunized and sensitized animals more quickly than the heterologous antigen, while the rate of absorption of both antigens from normal animals is much the same The antigens used were horse serum as specific antigen and goat serum as heterologous The most marked difference was noted in the absorption of the two antigens from the skin of the immunized animals While horse serum was absorbed with a rapidity far in excess of that exhibited by the sensitized and normal tissues, goat serum, the heterologous antigen, disappeared from the skin of the immunized pigs much less rapidly than from that of normal and sensitized animals

Cutaneous Antibodies

Drs M W Cook and G H Smith, Glen Olden, Pa The presence of cutaneous antibodies in the skin of immunized and sensitized guinea-pigs was demonstrated by determining in the filtered emulsions of skin the content in precipitins for the specific antigen The possibility that circulating antibodies might be responsible for the positive reactions obtained was excluded by perfusing the animals with salt solution and demonstrating the completeness of removal of circulating guinea-pig serum by titering the perfused skin emulsions with rabbit antiguinea-pig serum While slightly positive results were obtained in these titrations, the fact that the circulating guinea-pig serum had been removed was confirmed by failure to find in the tissue emulsions any trace of a heterologous serum which was injected intravenously into the guinea-pig a short interval before death

Classification of Strains of Meningococci

Dr G H Robinson, Providence, R. I Horses were immunized against type strains of meningococci Mice were injected with the serum of these horses, and the protective value of the serum against other strains of cocci was determined By this method the strains tested fall into two distinct groups and another heterogeneous group, which as yet has not been completely analyzed Of the tested strains, 40 per cent belong in the first and second groups, and 20 per cent in the third group Concordant results are obtained by actively immunizing the mice and then estimating the protective value against the strains to be tested

The Selection of Horses for the Production of Diphtheria Antitoxin by an Intrapalpebral Toxin Test

Drs A P Hitchens and E K Tingley, Glen Olden, Pa The work of Park and Zingher has shown that persons possessing natural diphtheria antitoxin react to injections with the production of antitoxin more readily than do those who have little or no diphtheria immunity We thought this might be true also of horses, and that with a modification of the Schick test we could indicate the productive possibilities of horses with regard to diphtheria antitoxin The injections were made intrapalpebrally The technic was similar to that of Moussu in testing cattle with tuberculin With a sterile 1 c c record syringe, 0 2 c c. of diluted diphtheria toxin was injected as superficially as possible into the conjunctival mucous membrane of the lower lid Usually the left eye was used for the test, the right for control After twenty-four and forty eight hours, readings were made Fulness of lid, tenderness and watery discharge is indicated by +, lid swollen, eye half closed, + +, lid badly swollen, eye nearly closed, painful, photophobia, profuse purulent discharge, + + + The reactions usually last several days Pseudoreactions are classed as negative

DISCUSSION

Dr J A Kolmer, Philadelphia I should like to ask Drs Tingley and Hitchens if they titrated out the serum in negative animals for antitoxin, as in the Schick test the negative reaction indicates natural antitoxin

Dr A P Hitchens, Glen Olden, Pa Seventy-five per cent. of those reacting negatively became productive against 14 per cent positively reacting This is the first indication we have had that a horse would produce antitoxin One horse had twenty-five units per cubic centimeter of natural antitoxin

Dr. Collins Over what time did this test apply? Did you do the mallein test, if so, before or after? How long does it take horses to clear up so that if not acceptable they can be returned?

Dr A P Hitchens, Glen Olden, Pa We are not depending on the mallein test, we think complement fixation is more reliable The mallein test is made in the stable in which the horse is purchased The intrapalpebral tests are made after the horse is received at Glen Olden We have accepted all horses, regardless of reaction, so far, and may continue to do that to get more data

Dr J A Kolmer, Philadelphia How long does the reaction last? Is there necrosis of the cornea?

Dr E K Tingley The reaction lasts about a week The cornea is not at all affected

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Medical Sciences, Philadelphia

May, CLIII No 5

1 *Chemotherapy in Tuberculosis P A Lewis, Philadelphia —p 6_5
2 Strangulated Retroperitoneal Hernia into Paraduodenal Fo a Operation Death W P Bramlett and A P C Ashhurst Philadelphia —p 641
3 *Mineral Metabolism of Experimental Scurvy of Guinea Pig L Baumann and C P Howard, Iowa City, Iowa.—p 650
4 Principles and Practice of Registering Heart Sounds by Direct Methods C J Wiggers and A Dean, Jr, New York —p 666
5 *Metabolism and Dietetic Treatment of Rheumatoid Arthritis R Pemberton, Philadelphia.—p 678
6 Symptomatology and Treatment of Arteriosclerosis W C Stoner, Cleveland —p 693
7 Focal Sepsis in Genito Urinary Tract as Cause of Constitutional Disease B A Thomas, Philadelphia —p 701
8 *Head Colds from Standpoint of Internist, Their Results and Treatment. T F Reilly, New York —p 709
9 Diagnosis of Melanoma (Melanotic Sarcoma) by Means of Resultant Effusions C C W Judd, Baltimore —p 717
10 *Effect of Castration on Osteomalacia in Male C A Elliott and W H Nadler, Chicago —p 722
11 Autointoxication and Its Treatment by (Trans) Duodenal Lavage M E Jutte, New York —p 732
12 *Comparative Study of Toxic Effects of Natural and Synthetic Salicylic Acids P Bartholow and A McNeil, New York —p 738

1 Chemotherapy in Tuberculosis—The accomplishments of the laboratory of the Henry Phipps Institute up to the present in the endeavor to study tuberculosis from the chemotherapeutic point of view are summarized by Lewis as follows "We have built up several substances which in the test tube are capable of restraining the growth of the tubercle bacillus in marked and measurably specific degree, and which when injected into the living tuberculous animal are capable of penetrating to the center of the masses of diseased tissue"

3 Mineral Metabolism in Experimental Scurvy—An examination of the evidence, both experimental and clinical, obtained by Baumann and Howard leads to the view that scurvy, and perhaps the allied diseases as well, are due to the absence of certain substances in the dietary The lack of this material appears to have a profound effect on the mineral metabolism of the guinea-pig

5 Metabolism and Treatment of Arthritis—Experiments are cited by Pemberton in which it has been possible to relieve patients of all or practically all symptoms of diffuse arthritis by a large curtailment of carbohydrate coincidentl with the ingestion of fat in such increased amounts as to make up or exceed this caloric deficit When the protein intake has been kept approximately constant some such patients have actually gained weight while convalescing This evidence by exclusion ascribes an injurious role to carbohydrate, is additional to that already published and is corroboratory of it Pemberton finds it difficult to avoid the conclusion that fat, while it cannot be used with impunity in treating these cases, plays a relatively harmless role in marked contrast to carbohydrate It can apparently be used in many cases to meet more or less, the loss of weight which would otherwise ensue and in certain selected cases to meet it entirely or even to cause the patient to gain weight The difference in the effects of large amounts of carbohydrate when ingested by normal individuals and by subjects of rheumatoid arthritis is not reflected in the carbon dioxid tension of the alveolar air under the limited conditions of the experiments

8 **Treatment of Head Colds**—Head colds according to Reilly are always infections He treats the condition first, by restricting the diet Partaking of large quantities of protein food increases the nasal congestion Second, purgation is caused early and often Third, a hot mustard foot bath also acts as a derivative and is particularly valuable on the first and second day of the cold Fourth, the stereotyped advice should always be given to avoid draughts wet feet and crowded places Fifth, tobacco must be interdicted for a few days at least and alcohol in the form of beer, whisky or rum is absolutely contraindicated Sixth, Reilly has little use for drugs especially quinin and Dover's powder Local treatment is by far the most important he says He uses an alkaline spray repeated until a mild blowing of the nose is not followed by mucopus Ordinarily after the alkaline spray the following spray is used phenol 3 minims, iodin, 6 grains potassium iodid 6 grains, peppermint water, ½ ounce, glycerin, ½ ounce, water, sufficient to make 3 ounces This is sprayed until it reaches the throat After this an oil spray containing oil of cloves camphor, menthol, oil of pine and liquid petrolatum is used

10 **Castration in Osteomalacia**—Five years after castration the case reported by Elliott and Nadler shows no actual improvement in bone structure A probable remission has occurred, which may have been influenced by the operation In the authors' opinion the result of castration in this patient would seem to indicate that osteomalacia is not a disease of the sexual glands

12 **Toxic Effects of Salicylic Acid.**—In order to institute a comparison, Bartholow and McNeil examined the acids and their sodium salts, and made some clinical studies of the action of the following substances described as complementary cinnamate of sodium, phthalic acid saligenin, salicin, methyl salicylate The authors found that the difference between the natural and synthetic salicylates in man is somewhat more distinct. In the case of the natural acid when administered to adults there was less gastric disturbance the cerebral effects were slighter, and in general it may be said that this substance is better borne than the commercial acid It is not so toxic in very large doses though when more than 75 grains are given in twenty-four hours there is a tendency to delirium in the susceptible to salivation and flushing of the integument. The noises in the ears are noticed on the second day, as a rule, of administration It seems clear that the natural acid has less cumulative effect

American Journal of Orthopedic Surgery, Boston

May XV No 5

13 *An Experimental Study of Reaction of Rabbit's Joint to Mechanical Injury J E Paulson San Francisco—p 337
14 *Osteochondromatosis of Knee Joint M S Henderson Rochester Minn—p 351
15 Tabetic Spinal Arthropathy (Charcot's Spine) Treated by Intradural Injections of Mercurialized Serum R W Billington Nashville, Tenn—p 357
16 Scoliosis E. G Abbott Portland Me.—p 362
17 New Methods in Preparation and Use of Plaster-of Paris. R. C Barrett Philadelphia—p 418

13 **Joint Reaction to Mechanical Injury**—In none of the experimental cases studied by Paulson did injury to the knee joint in the form of removal of the articular cartilages and a thin layer of the underlying bone, cause any apparent loss of efficiency of the joint In all the cases there was regeneration, to greater or less extent, of bone and cartilage, except in a case in which infection was present The bone apparently regenerated from the osteogenetic tissue in the marrow spaces The regeneration of cartilage apparently took place in the following manner (1) degeneration of a few cells at the border of the injury, (2) proliferation and hypertrophy of the next layer of cells, (3) outgrowth of cartilage from the remaining cartilage, periosteum and tissue of the marrow spaces, (4) transformation of the fibrous tissue into fibrocartilage, the process being apparent first in the vicinity of the old cartilage and at the junction of the fibrous tissue and bone, (5) and finally transformation of the fibrocartilage into hyaline cartilage In some cases there was formation of exostoses, and this was very marked in one case In these cases there were large areas of apparently isolated cartilage, and bone formation seemed to be progressing from them The bone formation in the exostoses was all of the cancellous variety

14 **Osteochondromatosis of Knee Joint.**—In the case reported by Henderson there was a history of severe trauma at the onset The roentgenogram revealed also multiple loose bodies in the knee joint. The specimen removed from the femur at operation showed the tumor to be the osteochondroma type the cells not appearing malignant. The synovial membrane of the joint apparently was participating in the new growth The synovia was hypertrophied and pouched In places the pouches were pedunculated, with the tips becoming cartilaginous, some were of good size, being larger than a pea The new growth from the bone had already broken through into the joint by way of the internal condyle, forming an exostosis in the joint cavity itself After operation the tumor rapidly recurred and increased in size A second specimen showed a mixed cell sarcoma, and amputation was performed When the patient was dismissed the roentgenogram showed metastasis in the lungs

15 **Mercurialized Serum in Tabetic Spinal Arthropathy**—Billington gave his patient at intervals of two weeks, four intradural injections of mercurialized serum ($\frac{1}{40}$ gr bichlorid at each dose), followed by potassium iodid and inunctions of mercury for a year At the fourth injection, the spinal fluid examination showed practically no change. The reactions were rather severe, and further injection was refused He was then put in a plaster jacket, with moderate correction, for two months, followed by a brace, which he still wears The gastric crises and lightning pains ceased immediately, and have not returned except for an occasional slight leg pain which he scarcely notices He has gained about 10 pounds in weight, and he says both bowel and bladder control are much improved His gait is somewhat steadier, probably due to increased strength and the spinal support Spinal deformity is somewhat less noticeable, and flexibility is considerably decreased in the lumbar region, a certain amount of fixation having taken place It is now fifteen months since the beginning of treatment. The patient's general condition is definitely improved, but there has been no apparent checking of the progress of the vertebral disease.

American Journal of Syphilis, St. Louis

April I No 2

18 Spirochetes H Noguchi New York.—p 261
19 Action of Vanadium with Particular Reference to Syphilis F Proescher and H A Seil Pittsburgh A W Stillians Chicago —p 347
20 Procedure for Serum Diagnosis of Syphilis Especially Recommended for Hospital Routine J Bronfenbrenner and M J Schlesinger Pittsburgh—p 406
21 Palmar Syphilids H Fox, New York.—p 422
22 *Series of Ruptured Aortic Aneurysms P G Woolley Cincinnati —p 426
23 Serological (Diagnosis of Syphilis with Special Reference to Hecht Gradwohl Test. R B H Gradwohl St. Louis—p 450
24 Influence of Wassermann Test on Surgery T L. Rhoads Cristobal—p 468

25 *Syphilis of Duodenum, Report of Case J L Mortimer, Denver —p 473
26 Experimental Syphilis Produced Through Local Applications to Mucous Membranes M A Reasoner, Washington, D C—p 478

22 Ruptured Aortic Aneurysms—The cases which form the basis of Woolley's communication form an interesting group because they illustrate the directions which aneurysms may take in relation to other organs In one case the perforation was external, through the sternum, in one it was into the superior vena cava, in one it was into the left pleural cavity by way of the diaphragm, in one it was retroperitoneal, in one it was into the left pleural cavity by way of the left lung, in two it was into the left main bronchus, in one it was into the left ventricle, and in one it was into the pulmonary artery, six were therefore aneurysms which sprang from the arch of the aorta Two were developed from the abdominal aorta

25 Syphilis of Duodenum—A diagnosis of duodenal syphilis was made by Mortimer for the following reasons 1 History of onset one year after marriage, the birth of a syphilitic child, husband died of paresis Both Wassermann reactions and symptoms cleared up previously under antisyphilitic therapy 2 Presence of a hard irregular mass in the right hypochondrium 3 Roentgen signs which show decisive evidence of postpyloric pathology 4 Positive Wassermann reaction 5 The marked improvement under antisyphilitic therapy, the patient stating that she was entirely free of abdominal pain and tenderness The diminution in the size of the tumor

Annals of Surgery, Philadelphia

May LXV, No 5

27 Kidney with Double Pelvis and Double Ureter, Nephrolithiasis Pyonephrosis, Nephrectomy, Report of Case L S Pilcher, Brooklyn —p 534
28 Problem of Prostatic Obstruction J H Cunningham, Jr, Boston —p 538
29 Congenital Strictures and Spiral Twists of Ureters, Report of Case D N Eisendrath, Chicago —p 552
30 *Anomalies of Urinary Tract M Krotoszyner, San Francisco —p 560
31 Indications in Kidney Surgery G Kolischer, Chicago —p 573
32 Case of Bilateral Polycystic Kidney F R Hagner, Washington, D C—p 580
33 Echinococcus Disease of Kidney Report of Case J I Russell and E F Kilbane, New York —p 585
34 Preliminary Renal Drainage with Special Reference to Two Stage Operation on Kidney J R Caulk, St Louis —p 593
35 *Influence of Venous Collateral Circulation of Kidney on Hydro nephrosis J D Barney Boston —p 597
36 *Unusual Case of Renal Tuberculosis B A Thomas and J C Birdsall, Philadelphia —p 602
37 Case of Bilateral Renal Calculi E O Smith, Cincinnati —p 606
38 Experience with Papaverin in Treatment of Ureteral Calculus H A Fowler, Washington, D C—p 611
39 Recent Observations in Cystoscopic Technic W F Braasch, Rochester Minn —p 615
40 *Value of Bacillus Bulgaricus in Treatment of Coccus Infections of Bladder R F O Neil, Boston —p 621
41 Sarcoma of Bladder in Child C G Mixter, Boston —p 628
42 *Use of Radium and Punch Operation in Desperate Cases of Enlarged Prostate H H Young, Baltimore —p 633
43 Sidelights on Prostatic Abscess J F McCarthy, New York —p 642
44 Nongonorrheal and Nontuberculous Epididymitis I S Koll, Chicago —p 646
45 Surgical Significance of Estimation of Nonprotein Nitrogenous Constituents of Blood H J Scherck and R B G Gradwohl, St Louis —p 648
46 *Results of Operations for Tumors of Breast, Benign and Malig nant P M Pilcher, Brooklyn —p 654

30 Anomalies of Urinary Tract—Krotoszyner reports the following cases 1 Renal hypoplasia (rudimentary kidney) and hydro-ureter on the left side 2 Horseshoe kidney (fused type), bilateral nephrolithiasis, pyonephrosis of right side 3 Double bladder in a prostatic, ascending pyelonephritis 4 Congenital diverticulum of the bladder, hypertrophy of prostate, chronic cystitis

35 Collateral Circulation in Hydronephrosis—The conclusions drawn by Barney from his experimental observations are 1 Sudden, complete and permanent obstruction and one ureter produces hydronephrosis in animals in the vast majority of cases, but (2) atrophy of the kidney may develop in rare instances, (3) when hydronephrosis occurs the venous collaterals of the kidney are well developed, when atrophy of the kidney takes place it is due to a lack of development of these collaterals, (4) atrophy of the kidney may be produced experimentally, by simultaneous ligation of the ureter and of the veins which maintain the collateral venous circulation of the kidney, (5) when the obstruction to the ureter is partial or intermittent the hydronephrosis is of greater size than when the obstruction is complete, sudden and per manent, for in the latter event, urinary secretion ceases before the venous collateral circulation has time to develop

36 Renal Tuberculosis—In this case a calcified plaque in the internal iliac artery was mistaken for a ureteral calculus It subsequently proved at operation to be a reno-ureteral tuberculosis without calcification

40 Acid Urine in Coccus Infections of Bladder—In all cultures of O'Neil's cases of incrusted cystitis the culture showed a growth of streptococci and staphylococci, *Bacillus proteus* and *B coli* Beyond this no attempt was made to plate out any given strain of bacteria The cultures after treatment showed, with two exceptions, colon bacilli only Emulsions made from tablets were used in the earlier cases These were not very satisfactory Later the liquid culture was used Twenty c c were injected into the bladder through a catheter after preliminary cleansing irrigations From the analysis of seven personal cases, O'Neil feels justified in drawing the following conclusions 1 That the incrustations met with in this form of coccus infection, with an alkaline urine, can be removed more rapidly and permanently by the acidulation of the urine by the bacteria than by any other means 2 That in certain cases in which the incrustations are associated with alkaline urine and a marked tendency to the formation of soft phosphatic calculi, their recurrence may be prevented to a considerable extent by maintaining a strongly acid urine by this means 3 That the method may be of value in the treatment and prevention of the incrustations sometimes seen in urinary wounds 4 That the treatment to be of value must be carried out at regular intervals and will show better results in private practice or when patients are confined in the hospital than when treated in outpatient departments 5 That the method is of little permanent value where the infection is not confined to the bladder 6 That the treatment is entirely without any untoward effects

42 Radium and Punch Operation in Prostate Hypertrophy—Young's report serves to show that with radium the hypertrophied prostate may be made to atrophy so that a minor operation will suffice to restore normal urination The long duration of treatment, however suggests that it be confined to cases with severe complicating conditions which preclude perineal prostatectomy

46 Results of Operations for Breast Tumors—Pilcher's paper is summarized as follows In the early period in the development of every cancer of the breast it is absolutely curable If this fact were brought home to every woman, there would no longer be any deaths from cancer of the breast Even a large and long active surgical experience does not qualify any man to say positively in many cases of chronic cystic mastitis (secondary cytoplasia) whether there is a malignant element present or not Recognizing the frequency with which the supraclavicular glands are invaded in tumors in the upper quadrants of the breast, it is urged that every advanced case should have the benefit not only of axillary gland dissection but also removal of the supraclavicular glands as a part of the primary operation Cases of recurrence, even in which the *opposite* axilla or other breast becomes involved, are not necessarily *fatal*

Archives of Ophthalmology, New Rochelle, N Y

May, XLVI, No 3

47 Primary Pupillary Response to Light an Autonomic Reflex Argyll Robertson Pupil J Dunn, Richmond, Va —p 193
48 Excision of Tarsus in Trachoma G F Suker, Chicago —p 210
49 Diplobacilli in Corneal Ulcers H W Scarlett, Philadelphia —p 219
50 Tendo Muscle Lengthening and Description of Special Forceps H Lowell, Boston —p 224

51 Dacryocystorhinostomy A Wiener, New York—p 227
52 Fibrolysin in Treatment of Ocular Diseases R S Lamb Washington D C—p 233
53 Case of Congenital Enophthalmos in Connection with Complete Absence of Abduction and Retraction of Eyeball in Adduction A Lutz Habana, Cuba—p 243
54 Case of Optic Hallucinations with Hemianopsia O Schirmer, New York—p 247
55 Case of Toxic Choroiditis Secondary to Chronic Alveolar Abscess Subsequently Treated with Vaccine Therapy E H Rowe, Baltimore—p 251
56 Anterior Chamber Syringe for Washing Out Cortical Matter After Cataract Extraction J A Andrews New York—p 256
57 Value of Eye Manifestations Complicating Fractured Skull. M Cohen New York—p 258

Boston Medical and Surgical Journal

May 10 CLXXVI No 19

58 Treatment of Osteomyelitis C C Simmons Boston—p 653
59 *Personal Experience with Carcinoma of Cervix. L Davis Boston—p 660
60 Intestinal Venous Stasis Diffusion of Bacteria and Other Colloids F B Turck New York—p 663

May 17 No 20

61 *Recent Investigations on Bacteriology of Acute Poliomyelitis L Hektoen Chicago—p 687
62 Mouth Infections in Their Relation to Systemic Disease. P A. Hudnut Northampton—p 695
63 Incidence of Intestinal Adhesions as Factor in Chronic Intestinal Stasis in Epilepsies H Caro Palmer—p 697
64 *Respiratory Suction an Aid in Surgical Shock. W T Porter, Boston—p 699

59 **Carcinoma of Cervix**—Out of the total of fifty-one cases reported on by Davis, thirty-three were subjected to some palliative operation, for the most part curettage and cauterization The Percy technic has been carried out completely in eight cases only In four other cases the Percy technic was employed so far as the use of the heating iron was concerned but without ligation of the internal iliacs In all but one case in which the Percy method was employed the disease seemed hopelessly advanced certainly too much so to permit of radical removal The one favorable case in which a radical hysterectomy might have been done, but in which the Percy operation was adopted has shown extension of the disease within six months and the patient is now dying one year from date of operation There have been three cases in which the Percy method was used in which very distressing urinary fistulas developed There was one case of moderate secondary hemorrhage controlled by packing As to end results curettage and cauterization have given a short period of immunity from hemorrhage and foul discharge of from six weeks to six months There has been no noticeable lessening of pain Of the twelve cases in which the Percy technic was carried out in whole or in part four have not been heard from since Two died of the disease, respectively three and five months after operation One patient is at present dying of the disease one year after operation Three patients have been heard from three to eight months after operation with unmistakable evidence of disease in the pelvis, one of these, however, seems to have been greatly relieved symptomatically One patient reports by letter six weeks after operation as feeling relieved One patient six months after operation although suffering from urinary fistula presents no evidence of malignancy From this experience Davis feels little enthusiasm for the Percy operation

61 **Investigations on Bacteriology of Poliomyelitis**—The work and reports of George Mathers are reviewed and analyzed by Hektoen The coccus discovered by Mathers is discussed as to its cultural peculiarities, morphologic characteristics filterability effects in animals resistance to glycerol, and reactions of immunity Experiments with monkey passage virus and poliomyelitis in the rabbit are also considered with special reference to the changes caused in the nervous system of this animal by the coccus under consideration. The micrococcus appears to have many properties in common with the virus of the disease and with the minute organism described by Flexner and Noguchi In various aerobic cultures that is blood agar the coccus grows more or less like a streptococcus of the viridans type, and herein it differs from the minute organism of Flexner and Noguchi, which is not known to grow under aerobic conditions at all However, Hektoen concludes that the exact significance of this coccus in epidemic poliomyelitis cannot be determined now The number of cases studied for its presence is too small to permit the conclusion that it occurs constantly in the disease or any form of the disease, in the few instances in which injections of cultures have resulted in a condition indistinguishable from what is accepted as poliomyelitis in the monkey, the possibility that another and more important microbe may have been present cannot be excluded, the true poliomyelitic nature of the very interesting lesion caused by the coccus in rabbits has not been confirmed by proper tests on monkeys, and the results of extended immunization experiments are also lacking

64 **Respiratory Suction Aid in Surgical Shock.**—By increasing the carbon dioxid in the inspired air, deep and rapid respiration is produced and the blood is pumped from the veins into the heart Porter says that the necessary amount of carbon dioxid is not injurious To an animal it can be given from a gas tank discharging through a Woulfe bottle into a T tube, the short limb of which is attached to the tracheal cannula In man, rebreathing may be employed The patient may breathe in and out of a rubber bathing cap, previously inflated with a Davidson syringe When oxygen hunger approaches, the cap is removed In a moment or two the experiment may be repeated In the course of the past two months, March and April Porter has with carbon dioxid produced deep and rapid respiration in many animals in whom surgical shock had been brought on by injecting oil into the external jugular vein The diastolic arterial pressure in these animals was often dangerously low In every case, the diastolic pressure rose 15 to 30 mm of mercury Such a rise, for example, from 50 to 70 mm, carries the pressure out of the danger zone The author has made as yet no observations on men with shock.

Bulletin of Johns Hopkins Hospital, Baltimore

May XXVII No 315

65 *Sacro Iliac Strain W S Baer, Baltimore.—p 159
66 Mechanism and Clinical Significance of Anaphylactic and Pseudo Anaphylactic Skin Reactions J A. Kolmer, Philadelphia—p 163
67 *Tuberculosis of Tongue W C White and C H Marcy, Pittsburgh—p 174

65 **Sacro-Iliac Strain**—Kernig's sign is positive in the diagnosis of sacro-iliac strain, says Baer If one flexes the fully extended leg on the abdomen, the amount of that flexion is naturally limited (Kernig's sign), and pain is referred to the sacro-iliac joint behind This is due to the contraction and spasm of the hamstring muscles Kernig's sign is absent in the opposite leg, but at times flexion of the fully extended leg on the abdomen of the good side causes pain referred to the sacro-iliac joint of the bad side At times there is an undue mobility which may be made out at the sacro-iliac joint by firmly grasping the ilia in the hands and forcing them together This however, is rare, although Baer has seen it in sacro-iliac strain following the puerperium and in the direct traumatic variety

67 **Tuberculosis of Tongue**—White and Marcy report the case of a tuberculous man, aged 30 who developed a tuberculous ulcer on his tongue The chief symptoms of the ulcer were soreness and swelling The pain was so severe when food was taken that the patient could not eat. He lost 20 pounds in five months His home physician treated the ulcer locally with silver nitrate and iodin for five months Only by the use of cocain locally was he able to eat. He lost 10 pounds in weight in two months in the hospital, and the ulcer continued to increase in size The surgeon's advice was to excise the tongue wide of the lesion The authors suggested that a trial be given to injection of tuberculin into the base of the lingual ulcer This was done. At the end of twenty-four hours the tongue was swollen red and a little more painful At the end of forty-eight hours it was still slightly swollen but not sore, and the increased redness was fading After this the ulcer commenced to diminish in size until at the end of one week it was not more than half the

size and the patient was able to eat without pain Two weeks later a second dose was given in the same way One week later a reduction again of approximately 50 per cent in the size of the ulcer A third injection was given two weeks after the second Twelve days later the ulcer had almost completely healed and he was again rapidly improving in weight and health A fourth dose of tuberculin was given when the ulcer was quite healed, and only a small fissure left to mark its former site

Florida Medical Association Journal, Jacksonville

April III No 10

68 Focal Infection H M Ginsberg, Pensacola —p 289
69 Surgical Conception of Pyorrhea C Hutchinson, Pensacola —p 291
70 Management of Confusional States with Special Reference to Pathogenesis T A Williams, Washington, D C —p 292
71 Cardiopyloric Anastomosis M H Smith, Jacksonville —p 298
72 Obstetrics Outside Maternity Hospital and Square Deal to Mother and Her Offspring, or Obstetrics in Rural Home P L Goss, Mulberry —p 300
73 Oral Affections and Their Effect on General Health W S Hall, Pensacola —p 304
74 Review of One Hundred and Forty Eight Cases J S Turberville, Century —p 307

Journal of Cutaneous Diseases, Boston

April XXXV No 4

75 Annular Macular Syphilid, or So Called Neurosyphilid H Fox, New York —p 215
76 Research on Syphilis J E R McDonagh, London —p 222
77 Practical Points in Roentgen Therapeutics C A Simpson, Washington, D C —p 231
78 Erythrodermic Congenitale Ichthyosiforme G M MacKee and I Rosen, New York —p 235
79 Case of Favus R A McGarry, Ann Arbor, Mich —p 253

Journal of Immunology, Baltimore

April II No 3

80 Immunochemical Studies of Proteins of Cat Hair R P Wodehouse, Boston —p 227
81 Immunochemistry of Proteins of Horse Dander R P Wodehouse, Boston —p 237
82 Immunochemistry of Proteins of Dog Hair R P Wodehouse, Boston —p 243
83 *Hyperleukocytosis and Its Bearing on Specific Therapy H Zinsser and E Tsen, New York —p 247
84 Intracutaneous Absorption of Antigen G H Smith and M W Cook, Glenolden, Pa —p 269
85 Influence of Typhoid Vaccine on Tuberculous Guinea Pigs H Baldwin and E S L'Esperance, New York —p 283
86 *Complement Fixation in Tuberculosis with Partial Antigens of Deyke and Much A C Woods, G E Bushnell and C Maddux, Fort Bayard, N M —p 301
87 *Complement Fixation in Acute Anterior Poliomyelitis J A Kolmer and A E Freese, Philadelphia —p 327

83 **Hyperleukocytosis and Specific Therapy** —The experiments reported by Zinsser and Tsen show that when homologous gram-negative bacilli are injected into immunized animals there seems to be a definitely higher leukocytosis in the immunized animals than in normal controls similarly treated It seems reasonably clear that an animal reacts more energetically so far as its mobilization of leukocytes is concerned when reinjected than does a normal animal treated with the same variety and quantity of bacteria When immune animals are treated with heterologous bacteria, that is, when prodigiosus bacilli or colon bacilli are injected into typhoid immune animals and vice versa, there seems to be no specific difference in response The injection of leukocytic extract does not arouse as vigorous a leukocytic response as does the injection of bacillary protein The authors coordinated their observations by assuming that when an animal is injected with gram-negative bacilli, in the presence of which this poison is formed with relative ease, the animal is intoxicated, which accounts for the preliminary leukopenia, and then reacts vigorously if the dose has been moderate and the toxemia easily overcome If the dose is too large and the toxemia too profound, or the injection cumulative in so far as it has followed too soon on another injection, the reaction is less vigorous

86 **Complement Fixation in Tuberculosis** —Partial antigens were prepared by the authors from the tubercle bacillus, by disintegrating the bacilli in 1 per cent lactic acid, filtering, and extracting with alcohol, at varying temperatures, and with ether The resulting antigens appear to be composed chiefly of the various fatty acids, and neutral fat of the tubercle bacillus together with traces of protein One hundred and seventy-six normal and tuberculous serums were titrated against these partial antigens, and against whole bacillus emulsion antigen Seventy-two of the serums obtained from clinically normal cases, and 91 per cent of the serums from cases classed clinically as inactive tuberculosis reacted negatively to these antigens Ninety per cent of the serums from cases classed clinically as incipient tuberculosis, 87 per cent. of the serums from cases classed as active tuberculosis, and 92 per cent of the serums from advanced tuberculous cases reacted positively to the partial antigens Sufficient syphilitic serums could not be obtained to make any determination of the proportion of syphilitic serums which would react positively to these antigens, but judging from twenty-seven positive Wassermanns obtained at the same time the serums were examined, there appears to be little relationship between the Wassermann reaction and the reaction to the partial antigens

87 **Complement Fixation in Acute Poliomyelitis** —Complement fixation tests conducted by Kolmer and Freese with the cerebrospinal fluids of 130 persons suffering with acute anterior poliomyelitis and salt solution extracts of various tissues yielded from 6 to 16 per cent. weakly positive reactions with extracts of spinal cord, pons and medulla, cerebellum, cerebrum and 15 to 17 per cent positive reactions with extracts of poliomyelitic liver and spleen Control antigens of nonpoliomyelitic human and rabbit liver yielded negative reactions, while extracts of spleen yielded from 5 to 7 per cent positive reactions With alcoholic extracts of these tissues the tests were uniformly negative The cerebrospinal fluids of normal persons and children suffering with whooping cough and measles yielded negative reactions with all extracts The cerebrospinal fluids of several paretics yielded strongly positive reactions with all salt solution and alcoholic extracts Complement fixation tests with the serums of fifty-eight persons in the various stages of acute anterior poliomyelitis yielded slightly positive reactions with 2 to 4 per cent. of serums with salt solution extracts of spinal cord pons and medulla, cerebellum and cerebrum Tests with extracts of poliomyelitic liver and spleen were uniformly negative, as were all tests employing alcoholic extracts of these different tissues With polyvalent suspensions of diplococci and streptococci cultivated from persons suffering with acute anterior poliomyelitis, weakly positive reactions were observed with 6 to 9 per cent. of cerebrospinal fluids of thirty-five persons suffering with the disease, with serums all tests were negative, as likewise all tests with fluids and serums employing suspensions of the diphtheroids and gram-negative bacilli cultivated from poliomyelitis cases

Journal of Infectious Diseases, Chicago

May XX, No 5

88 Oxidase of Rhus Diversiloba J B McNair, Berkeley Calif —p 485
89 Anaphylatoxin and Anaphylaxis Trypanosome Anaphylatoxin F G Novy, P H DeKruif and R L Novy, Ann Arbor, Mich —p 499
90 Agar Anaphylatoxin Guinea Pig Serum F G Novy and P H DeKruif Ann Arbor, Mich —p 536
91 Id Rabbit Serum F G Novy and P H DeKruif, Ann Arbor Mich —p 566
92 Id Rat Serum F G Novy and P H DeKruif, Ann Arbor, Mich —p 589
93 Effect of Multiple Doses of Anaphylatoxin F G Novy and P H DeKruif, Ann Arbor, Mich —p 618
94 Effect of Intravenous Injections of Agar F G Novy and P H DeKruif, Ann Arbor, Mich —p 629

Journal of Parasitology, Urbana, Ill

March III No 3

95 Sporozoon Parasites of Fishes of Woods Hole and Vicinity C W Hahn —p 91
96 Cercariae of Bitter Root Valley, Montana E C Faust Urbana —p 105
97 Development of Gregarines and Their Relation to Host Tissues (1) in Stenophora Lactaria Watson M W Kamm —p 124
98 Cercariae of Natal F G Cawston —p 131
99 Species of Nosema Infecting Attacus Cynthia Drury S Ishiwata Tokyo, Japan —p 136

Medical Record, New York

May 12 XCI No 19

100 Osteochondritis Deformans Juvenilis—Perthes' Disease. V P Gibney New York —p 793
101 Blood Pressure Formulas Their Value and Significance F A Faught Philadelphia —p 796
102 Blood Pressure from Life Insurance Standpoint R M Goepp, Philadelphia —p 801
103 Blood Pressure from Standpoint of Surgeon G P Mueller, Philadelphia —p 803
104 Treatment of Chronic Catarrhal Deafness B Robinson, New York.—p 804
105 Handicap Due to Concomitant Diseases in Tuberculosis R L Ochsner San Francisco —p 805
106 Blood Donors in War Surgery F Robbins New York —p 807

May 19 No 20

107 Hemorrhages of Pregnancy Including Placenta Praevia E. P Davis, Philadelphia —p 839
108 Radium Emanation Waters C E Field New York.—p 843
109 Medical Treatment of Chronic Intestinal Stasis. M Einhorn New York —p 847
110 Therapeutic Use of Extract of Corpus Luteum H E Happel St. Louis —p 848
111 Adenoiditis C M Cobb Lynn Mass —p 850
112 Epilepsy and Its Treatment in Dispensaries L. Grimberg New York.—p 852
113 Hematuria Its Clinical Significance H W E Walther New Orleans —p 854
114 Folliculosis in Conjunctiva J A Kearney New York.—p 855

New York Medical Journal

May 12 CV No 19

115 Theories Concerning Pregnancy Labor and Placental Gland S W Bandler New York.—p 865
116 Uterine Fibroids J F Erdmann New York —p 872
117 Intraspinous Injections of Neosalvarsanized Serum in Nervous and Mental Diseases A Gordon Philadelphia —p 873
118 Factors Which Affect Results in Treatment of Prostatic Obstruction W E Lower Cleveland —p 877
119 Modern Diagnosis and Treatment of Syphilis B A Thomas and C H J Barnett Philadelphia.—p 879
120 Cardiac Therapy J N Upshur Richmond Va.—p 884
121 Frigolability D M Kaplan New York.—p 886
122 Favus of Scalp and Eyelids Report of Case W B Weidler, New York —p 887
123 Lingual Tonsil J L. Maybaum New York.—p 887

May 19 No 20

124 Exploratory Tympanotomy H Hays New York.—p 913
125 Amyotrophic Lateral Sclerosis. J H W Rhein Philadelphia —p 915
126 Suprapubic Prostatectomy N P Rathbun New York.—p 919
127 Tuberculosis of Knee Joint in Adult in which Operations Were Done Eliminating Motion by Producing Fusion of Femur and Tibia R A Hibbs New York —p 922
128 Surgical Aspects of Male Sterility A. L. Wolbarst New York —p 926 To be continued
129 Pseudohermaphroditism W S Gottheil and C Goldenthal New York —p 932
130 Vital Statistics of Old Age L. I Dublin New York.—p 936
131 Hydrocephalus Spina Bifida and Double Talipes Calcaneus Occurring in Same Fetus C B Conklin Washington D C —p 937
132 Lessons from Past and Possibilities for Future. D M Lewis New Haven Conn —p 939
133 Sporadic Leprosy in Connecticut. M J Morrissey Hartford, Conn —p 940

Ophthalmic Record, Chicago

April XXVI No 4

134 Contusion of Eye with Rupture Extending Across Optic Disk E A Shumway Philadelphia —p 167
135 Case of Parinaud's Conjunctivitis H V Dutrow Dayton Ohio —p 171
136 Some Causative Factors in Glaucoma in London Hospitals During Present Hostilities S D Maiden Council Bluffs Iowa —p 174
137 Occurrence of Ocular Defects and Disease at Massachusetts State Reformatory for Women at Sherborn L W Jessaman Framingham Mass —p 178
138 Injury of Sympathetic in Enucleation T J Dimitry New Orleans.—p 183
139 Precision Trial Case and Test Frame C. F Prentice New York —p 187
140 Clinical Consideration of Migraine J A. Litchy Pittsburgh —p 192

Public Health Journal, Toronto

April VIII No 4

141 Problem of Illegitimacy General Practitioner's Point of View W F Clark Toronto.—p 83
142 Illegitimacy Attitude of Social Worker M J Kniseley Toronto —p 86
143 Nurse Midwife F J Taussig —p 89
144 Survey of Spreading Health Insurance Movement. I. M Rubinow —p 92
145 Principles of Sewage Treatment J R Ellis —P 101
146 Infantile Increase and Child Conservation H B Weston, Winnipeg —p 111

Southwest Journal of Medicine and Surgery, El Reno, Okla

April, XXV No 4

147 Radium Statistical Study Report of Case D Gann, Jr, Little Rock, Ark —p 89
148 Mastoid Infections Report of Six Cases A J Lorie, Kansas City, Mo —p 104
149 Trachoma Surgical Operations in Use—Results Removal of Tarsal Cartilage and Palpebral Conjunctiva D W White and P C White Tulsa —p 108

Southwestern Medicine, El Paso, Texas

April I No 4

150 Differential Diagnosis and Treatment of Duodenal Ulcer M K. Wylder Albuquerque N M —p 9
151 Bacterin Therapy in Bronchial Asthma A D Wilson Prescott, Ariz.—p 18
152 Plea for More Intelligent Interest in Tuberculosis on Part of Medical Profession F H McKeon Fort Stanton N M —p 24
153 Roentgen Ray Diagnosis of Focal Infections About Head W W Watkins Phoenix Ariz.—p 34
154 Roentgenology Method of Differential Diagnosis of Gastric Symptoms C Epler Pueblo Colo —p 39
155 Cervical Suspension for Retrodisplacements and Prolapse of Uterus H White El Paso —p 45
156 Ancient Gunshot Wound of Forearm with Extensive Scar Formation and Contractions. W L Brown and C P Brown, El Paso —p 49

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Bristol Medico-Chirurgical Journal

April XXXV No 132

1 Diagnosis of Tuberculosis L J Short —p 1
2 Plague in Bristol in 1916 D S Davies.—p 16
3 Chronic Appendicitis in Its Relation to Dyspepsia Report of Cases H Goodwyn.—p 18

British Journal of Tuberculosis, London

April XI No 2

4 *Granules of Tubercle Bacillus J Sorley —p 51
5 Morphologic Variations in Nuclei of Polymorphonuclear Neutrophil Leukocytes in Pulmonary Tuberculosis J B McDougall —p 66

4 **Granules of Tubercle Bacillus**—Sorley's investigations have shown that it seems at present impossible to draw any very exact correspondence between the granular forms of the tubercle bacillus and the course of the disease The presence of the granules implies simply that the bacillus is in a state of active reproduction, the presence of interpolar granules that the bacillus has attained a stage of greater or less maturity, and that, whether the bacilli be few or many, the severity of the disease and the prognosis are not necessarily affected thereby, for it is a matter of common clinical observation that a case in which the prognosis is good may have many bacilli in the sputum whereas a case in which the prognosis is hopeless or grave may show few or even none at all

British Medical Journal, London

April 28 I No 2939

6 Medicine and Sea Affair A May —p 533
7 Medicine and Clinical Pathology P W Bassett Smith and H D Rolleston —p 533
8 Surgery W G Axford and G L. Cheatle.—p 535
9 Hygiene R C Munday —p 537
10 Service Afloat. R. Hill and E A Penfold —p 539
11 Hospital Ships E C Lomas —p 542
12 Account of Land Medical Transport Arrangements of Navy T Porter and A. V Elder —p 545

Edinburgh Medical Journal

May XVIII No 5

13 Scope of Preventive Work in Connection with Medical Treatment of Infants and Young Children J C Johnston.—p 329
14 Care of Children of School Ages L. D Cruickshank.—p 326
15 Mother Welfare in Pregnancy and Infant Health. J W Ballantyne.—p 348

16 Pediatrics and Child Welfare A D Fordyce—p 361
17 Some Practical Points Regarding Child Welfare Organization J Thomson—p 367
18 Care of Mentally Defective Children R D Clarkson—p 375
19 *Surgical Tuberculosis and Child Welfare A P Mitchell—p 383

19 **Surgical Tuberculosis**—Of 2,770 new cases treated in the surgical outpatient department of the Edinburgh Children's Hospital during 1913, 316 (fully 11 per cent) children were affected by one or other form of surgical tuberculosis, 169 with tuberculosis of the neck glands, thirty-nine with Pott's disease of the spine, twenty-two with hip disease, while the remaining eighty-six had the disease in other joints and parts These manifestations of tuberculous disease also constitute a very considerable percentage of all patients treated in the surgical wards of the hospital Mitchell says it is not uncommon to find at any time that no less than 50 per cent of the patients under treatment are cases of tuberculosis One is struck with the numerous instances of tuberculosis of the glands in the upper part of the neck met with in the large number of children coming for examination at the surgical outpatient department of the hospital These children, as a rule, show no clinical signs of tuberculosis elsewhere, and are, except for the local condition, apparently healthy It is not at all rare for a single member of an otherwise healthy family to exhibit the disease The high incidence of the disease in children from 2 to 3 years of age is striking The influence of infectious diseases, notably measles, whooping cough and scarlet fever in apparently favoring the dissemination of the disease in the glands is also worthy of note This indicates the great need for children during the convalescence from these infectious diseases being placed under the best hygienic conditions possible

How do tubercle bacilli reach the glands in the upper part of the neck? Invasion takes place either through the faucial tonsils or the adenoid tissue behind the nose In 38 per cent of the children affected with tuberculosis of the glands in the upper part of the neck the disease has first involved the tonsils The spinal column is the commonest seat of tuberculous bone disease in children Like tuberculosis of the neck glands, it is rarely preceded by clinical manifestations of other tuberculous process, although it may be followed by them The onset of the disease in a child who has been reduced by one of the infectious diseases, especially measles and whooping cough, is again a noteworthy feature There has previously been a latent focus of tuberculosis elsewhere in the body This has been frequently demonstrated at postmortem examinations in the bronchial and mesenteric glands Infection from these or from other tuberculous lymph nodes is the common point or origin of infection Not more than 5 per cent of cases of spinal caries are diagnosed before deformity has set in

Surgical tuberculosis among children is sufficiently prevalent to constitute a real danger to the community, and to urge the immediate necessity for some comprehensive and systematic attempt at prevention and cure Such questions as these relating to poverty, improper feeding and housing must be faced As a practical measure, tuberculin injections would appear to be of value in increasing the powers of resistance to the disease Open air schools are required for children who are definitely tuberculous, tuberculously disposed, or come from tuberculous houses The establishment of convalescent homes in the country for the adequate treatment of children affected by active tuberculosis is a much felt want The special care of children during convalescence from measles, whooping cough, and other acute specific diseases is greatly to be desired For the welfare of any community, large or small, the provision of a pure milk supply is of the utmost importance—clean milk of good quality from healthy cows and protected from contamination The powers at present vested in their local authorities are inadequate, and it seems to Mitchell to be their special duty to prevent this large and entirely preventable amount of tuberculosis among children What is most wanted is a well informed public opinion which will demand new and more drastic powers for the authorities and insist on these powers being exercised to their full extent.

Glasgow Medical Journal

April, LXXXVII, No 4

20 Inversion of Uterus, Report of Six Cases W D Macfarlane—p 193
21 *Effects of Cinematograph Displays on Eyes of Children W B I Pollock—p 206
22 Visual Defects, Refractive and Functional J A Wilson—p 211

21 **Effects of Cinematograph on Eyes of Children**—Pollock is convinced that the increased prevalence of squint among children of from 4 to 8 years is directly attributable to the excitement and nervous strain they are under while watching the more exciting and hair breadth escapes seen in many cinematograph displays An attendance of once a month is all that he would allow for schoolchildren, and he strenuously objects to the introduction of the cinematograph into school teaching, except at rare intervals

Indian Journal of Medical Research, Calcutta

January, IV, No 3

23 Opportunities for Medical Research in India P Lukis—p 381
24 *Simplified Technic of Bass' Method of Cultivating Malarial Parasites in Vitro and Few Observations on Malarial Parasites Cultured by this Technic R Row—p 388
25 *Flagellate Dysentery G C Chatterjee—p 393
26 Two Hemogregarines of Cold Blooded Vertebrates H E. Shortt—p 402
27 Bunostomum Kashinathi and Ancylostomidae C Lane—p 414
28 Are Echinostomum Malayanum and Artyfechinosomum Sufrartyfex Identical? C Lane—p 440
29 Dysentery in Jails of Eastern Bengal J Cunningham and H H King—p 442
30 *Study of Entamebic Cysts R Knowles and A F Cole—p 498

24 **Cultivation of Malarial Parasites**—The apparatus used by Row consists of (1) an ordinary potato culture tube (¾ inch wide) with a well fitting rubber cork, (2) one small culture tube made in the laboratory, (3) one sucking pipet armed with a rubber nipple, (4) pyrogallic acid, (5) strong caustic soda solution, (6) human blood serum (indifferent), usually obtained from the blood serum available for Wassermann reaction, (7) 25 per cent glucose solution, and (8) the infecting material, consisting of a few drops of blood taken from the patient at the bed side, shaken and defibrinated on the spot in the manner described below The culture tube is made from glass tubing (0 8 cm bore or thereabouts) by sealing off and gently blowing a small bulb at one end, this bulb is flattened so as to have a tube about 5 to 6 cm long with a flat bottom one and a half to twice the bore of the tubing used The object of this large flat bottom is to ensure a wide surface for the deposit of the corpuscles which settle down in a uniform thin layer during the time allowed for culture The thin deposit of the corpuscles is of importance, inasmuch as it affords, during subsequent examination, no chance of missing the particular layer rich in developing plasmodia Such culture tubes are also of great use on account of their small capacity, this is especially advantageous when only very small quantities of blood and serum are available The essence of Row's technic is to obtain a glucose serum and infect it with the blood corpuscles containing the plasmodia and in a proportion sufficient to give a thin and uniform deposit of the corpuscles in the flat bottom culture tube

25 **Flagellate Dysentery**—Chatterjee has examined and identified the parasites in altogether seventy cases The following were found monocercomonas, three cases, prowazekia, two cases, macrostoma, eighteen cases, lamblia, fifteen cases, and pentatrichomonas, thirty-two cases

30 **Study of Entamebic Cysts**—On examining 365 invalided British soldiers from Mesopotomia, Knowles and Cole found 20 per cent. infected with *E coli*, while 41 per cent of cases of acute or convalescent dysentery showed *E histolytica* Throughout the examination of 528 stools for entamebas the authors constantly found difficulty in deciding between *E coli* and *E histolytica* The differences between the ameboid forms of entamebic species are relative, subject to variation and not absolute There is no differentiation between the species as regards size of cysts The species show no distinctive difference as regards the contour, glycogen content, vacuolation and presence of chromidial rods in the cysts The authors believe that these different species are all one

and the same organism They suggest that the name *Entameba coli-communis* should replace the terms *E coli*, *E histolytica*, *E minuta*, *E tetragena*, etc. They have found that daily enemas of 1 in 80 of magnesium sulphate are of value as an adjuvant to emetin treatment

Journal of Tropical Medicine and Hygiene, London

April 16 XX No 8

31 Case of Pellagra A Visyalingam —p 85

Lancet, London

April 28 I No 4887

32 *War Surgery of Abdomen C Wallace —p 637
33 *Abdominal Surgery at Advanced Operating Center G S Hughes and W A Rees —p 642
34 *Surgery of Amputation Stumps G M Huggins —p 646
35 Korsakow s Psychosis in Association with Malaria H Carlill —p 648
36 Treatment of Diabetes Mellitus R T Williamson —p 650
37 Case with Severe Gastric Crises Treated by Aachen Methods R Hayes —p 652

32 **War Surgery of Abdomen** —From Wallace's article it is apparent that in surgery for the abdominally wounded, the mortality has been reduced at the front by some 10 per cent. and many fewer patients now die at the base The total number of cases 1,288, total mortality, excluding moribund, 50 per cent , total mortality, including moribund, 60 per cent , considered with view to operation, 1,038, total operations 965, total operative mortality, 54 per cent., total hollow viscera mortality, 65 per cent , stomach mortality, 53 per cent , small intestine mortality, 66 per cent., and great intestine mortality 59 per cent

33 **Abdominal Surgery at Advanced Station.**—Out of the 640 cases of severe injuries to the abdomen, head or chest, received in six months at the advanced operating station where Hughes and Rees were detailed 263 were wounds of the abdomen When patients arrive within twenty-four hours of being wounded, so long as they are not moribund, they are all operated on The following is an analysis of the time that elapsed between the receipt of the wound and the operation and shows how important early operation is 1 Patients operated on between one to six hours after wounding, forty-three, recovered twenty-seven, or 62 8 per cent., died, sixteen, or 37 2 per cent. In eight of the fatal cases the patients had such severe injuries that recovery was practically hopeless and they would not have survived to reach the operating room had they been brought in later 2 Patients operated on between six to twelve hours after wounding, thirty-three, recovered, twelve, or 36.3 per cent., died, twenty-one, or 63 7 per cent 3 Patients operated on between twelve to sixteen hours after wounding, eighteen, recovered, three, or 16.6 per cent , died fifteen, or 83 4 per cent 4 Patients operated on over twenty-four hours after being wounded, eleven, recovered, five, or 45 4 per cent , died, six, or 54 6 per cent Recoveries at forty-eight, thirty-six, thirty-three and a half, thirty-two and thirty hours, respectively Deaths at sixty, thirty-six thirty-two thirty, twenty-nine and twenty-eight hours In the series of 110 laparotomies one or other kidney was found to be wounded in fourteen In every case this was in association with other injuries In none of the series of 263 abdominal cases was operation necessary for the kidney condition alone, although damage to this organ was fairly frequently met with, as shown by pain and hematuria The complication of the passage of the missile through the pleural cavity before entering the abdomen does not contraindicate the performance of laparotomy It was present in eighteen laparotomies, in ten of which the patients recovered The results of six months work give the following figures total number admitted with abdominal wounds, 263, recovered, 136, or 51 per cent., died 127, or 49 per cent

34 **Surgery of Amputation Stumps** —According to Huggins no secondary amputations should be performed in cases of guillotine amputations until all edema has disappeared and skin extension has been employed for six weeks Guillotine amputation stumps above the middle of the leg or middle of the thigh should never be shortened until healed unless it is decided that the knee joint or hip must be sacrificed When shortening has to be done the minimum amount of bone necessary for utilizing the joint above should always be borne in mind A guillotine amputation may make a satisfactory stump in the leg and thigh, and almost always does in the forearm and arm without further reamputation. Bone in a stump does not necrose unless infected Delay in shortening stumps reduces the risk of infection, because infection is not in the wound only, but in lymphatics leading from the wound The amount of matting around the vessels leading to or from an amputation stump is very striking Silk should never be used for ligatures in operations on stumps Amputations should be done by skin flaps only, and no muscle should be utilized in the flap, the pad of fibrous tissue formed over the end of the bone from the organizing clot being all that is necessary All nerves, and not merely the main nerves, must be shortened at the time of the amputation or reamputation To prevent deformity, daily exercising the joints and the employment of splints and bandages are essential measures in preparing the stump for the artificial limb A good Syme amputation leaves the patient with little disability, and amputations through the tarsus should never be done as a secondary operation

Annales de Gynécologie et d'Obstétrique, Paris

March April LXXII pp 449 512

38 *Myoma and Pregnancy A Heimo (Geneva) —p 449
39 *The Functions of the Corpus Luteum C Mulon —p 458 Continuation E Novak (Baltimore) —p 487

38 **Myoma and Pregnancy** —Heimo is convinced that the defective involution of the uterus in many cases is due to the presence of a myoma, possibly unsuspected In one case he discovered a myomatous tumor on the right cornu of the uterus after delivery, but it had entirely disappeared by the ninth day The hypertrophy, softening and atrophy of a small or medium sized myoma during pregnancy prevent its interfering with delivery Operative intervention was required in only four myoma cases at the Geneva maternity in a recent eight year period These cases are described in detail The women were all in the thirties, and the disturbances from the myoma were so severe that the uterus was removed nothwithstanding the pregnancy of two, four or eight months' standing In case of doubt as to the myoma, Beuttner rubs the uterus lightly, to induce it to contract. As it contracts a myomatous tumor is thrown into greater relief over it but if the protuberance is caused merely by part of the fetus presenting, the protuberance disappears as the uterus contracts over it In case of doubt as to an existing pregnancy, when operative intervention is decided, it should be by a laparotomy If the uterus is to be removed, Heimo advocates the Kelly-Beuttner technic but enucleation may answer all the purposes in some cases The vaginal route is liable to disagreeable surprises Only about 20 per cent. of all the known myoma cases in his experiences were sterile When a myoma is discovered in a woman who has been barren for ten or twenty years, we cannot ascribe the sterility always to the presence of the myoma Hofmeier even declares that a myoma favors conception, not directly but because it postpones the menopause. Pinard says that uterine myomas develop as a consequence, not a cause of sterility They are the punishment for a uterus that has not served its physiologic function Heimo affirms, on the other hand, that we have unduly exaggerated the part played and the influence exerted by myomas on sterility and pregnancy

39 **The Corpus Luteum.**—Mulon here continues her exhaustive study of the corpus luteum The first part was summarized in these columns April 14 p 1148 She here discusses the connection of the corpus luteum with menstruation and rut, analyzing much literature on the subject.
Novak s article appeared in The Journal, Oct. 28, 1916 p 1285 It is here translated into French

Bulletin de l'Académie de Médecine, Paris

April 17 LXXVII No 16 pp 511 536

40 *Roentgenoscopic Diagnosis of Projectiles (De l emploi du compas Contremoulins regle d apres une localisation radioscopique utilisant un rayon normal vertical.) Kirmisson —p 522 (Extraction des projectiles de guerre intrapulmonaires) Bazy —p 527

41 *Bone Grafting, without Opening the Joint, for Pseudarthrosis of the Neck of the Femur P Delbet —p 530
42 To Increase the Birth Rate in France G Lepage —p 532
43 Felted Hair Forming Cast of Stomach and Upper Duodenum of Girl of Thirteen (Beau cas d'egagropile) Dauriac.—p 534

40 **Extraction of Projectile in Lung**—Bazy describes the method with which Petit de la Villeon removes a projectile in the lung, the whole procedure complete in a minute or two He works in red light, guided by the Roentgen rays After marking on the skin the point of the shadow of the projectile, he incises the skin two or three fingerbreadths to one side of the shadow, and then pushes into the depths a special forceps and seizes the projectile, guided by the shadows of the projectile and of the forceps as they approach each other The lung is remarkably tolerant and the small accumulation of blood along the track of the forceps is speedily absorbed as is evidenced by roentgenoscopy, but there may be a little blood in the sputum for a month Bazy warns that this technic is not applicable for projectiles in the hilus region, nor when an abscess has formed around the projectile or there is more than one foreign body

41 **Bone Graft for Pseudarthrosis of Neck of Femur**—Delbet here describes the ultimate outcome in fifteen adults in whom, without arthrotomy, he corrected crippling fracture or other injury of the neck of the femur, by ingrafting a rod of bone from 6 5 to 11 cm long The periosteum had been removed and the grafts retained their vitality In one of his cases the pseudarthrosis was of six years' standing, and of six years and four months in another case This latter patient served as a nurse through the campaign in Serbia One patient was an extremely obese woman of 59, with multiple arthritis and she died in about a year without having attempted to walk much Ten other patients walk without difficulty The others have had the grafting operation done quite recently, but the outcome is already very favorable Delbet gives no details of his technic beyond the above Its field is transcervical fracture, with decapitation, which entails pseudarthrosis The results of treatment are better the more recent the injury In one of his cases the neck seems to have been entirely restored, and in some others roentgenoscopy shows new bone production One woman of 70 is walking with scarcely any limp a year after the grafting operation

Le Nourrisson, Paris

V, No 1, pp 1-64

44 *Condensed Milk and Desiccated Milk in Infant Feeding A B Marfan —p 1
45 *Means to Collect Infants' Saliva G B Allaria (Turin) —p 13
46 *Tuberculin and Radiotherapy in Treatment of Tuberculosis in Infants A Combe —p 17
47 Organized Welfare Work for Infants in France. A B Marfan —p 39

44 **Condensed and Desiccated Milk in Infant Feeding**—Marfan insists that condensed milk should never be allowed as a regular diet, but that both condensed and desiccated milk are valuable in emergencies to supplement the regular diet for a short time or transiently during the heated term when good fresh milk cannot be procured He thinks that condensed skimmed and sweetened milk keeps better than when made from whole milk, and that it is digested more readily by the infant, especially when it has digestive disturbances When good fresh milk cannot be obtained, desiccated milk might be used for the regular food Many physicians have reported good results with it, and Marfan's own trials have been encouraging with the milk powder made with half its fat. It is useful when the infant's condition calls for a concentrated food of small volume with little fluid, or when a food poor in fat is required, or food in which the albuminoid substances have been modified in a way to promote digestion Desiccated milk might also be given a trial with habitual vomiting in infants that cannot get breast milk

With the ordinary diarrhea of bottle-fed babies nothing is so good as buttermilk Up to the age of 3 or 4 this is preferable Above this age malted soups are better, made first with water alone and then with increasing amounts of milk Sometimes the buttermilk and the soups do well together But when buttermilk cannot be obtained, desiccated milk is the next choice With choleriform diarrhea, desiccated skimmed milk has given him as good results as buttermilk When an infant displays actual intolerance for cow's milk, condensed milk, desiccated milk or buttermilk may be indicated By giving the milk powder at first in small amounts, rapidly increasing the amounts, an antianaphylaxis may be developed When an infant is not growing properly it may be well to try different foods, changing from desiccated to condensed milk, buttermilk, etc, leading up to a return to fresh boiled milk For infants with athrepsia, breast milk is the only salvation, but it usually comes too late In conclusion Marfan adds that condensed and desiccated milk may be found useful at any age with a tendency to dropsy They form a good concentrated food when fluids have to be restricted

45 **To Collect an Infant's Saliva.**—In research on gastric digestion in infants Allaria has found it convenient to use a vial about 18 cm long and 2 cm in diameter with two glass tubes passing through the rubber stopper One tube is connected with a faucet of running water, to secure an aspirating vacuum The other tube is connected with a long soft rubber tube that has a perforated china knob in the end This little knob is placed in the infant's mouth and as it sucks the knob the gentle aspiration from the water jet pump draws the saliva out into the bottle The glass tube conveying the saliva is cut slanting below, to reduce capillary action The tubes are cleansed by putting the stopper, with its tubes, in another test tube, and plunging the whole in a large vessel of water while the water jet pump is still kept going This aspirates the water through the tubes and cleanses them thoroughly The secretion of saliva can be stimulated by a drop of a 1 500 solution of saccharin The foregoing technic is capable of application to other fluids, tears, sweat, etc.

46 **Tuberculin and Roentgen Treatment of Tuberculosis in Infants**—This last work from the late Professor Combe brings down to the close of 1916 his experiences with systematic tuberculin treatment of tuberculosis in infants If the dose of tuberculin injected subcutaneously is adapted to the parenteral digesting power of the babe, the production of antibodies proceeds regularly and there is a general immunizing reaction in addition to a focal cicatrization reaction If the dosage is excessive, then anaphylaxis instead of immunization is induced We have in the intradermal tuberculin test a reliable index as to what is going on under the influence of the tuberculin injections Repeating this Mantoux intradermal tuberculin test at regular intervals shows whether the result is in the line of immunization or of anaphylaxis He commences with a tenth of a milligram and increases the dose gradually, at three day intervals, up to a decigram or even 50 cg, testing the results with the intradermal injection of always a tenth of a milligram every two weeks The progressive diminishing of the reaction to the Mantoux intradermal test, while the therapeutic dose is constantly being increased, shows that immunization is being realized and that the tuberculous process—usually a tracheobronchial glandular affection—is healing If the Mantoux reaction, instead of diminishing, grows more pronounced, the infants are not being benefited, but the reverse, by their tuberculin treatment and it should be suspended at once

The therapeutic injections are made intradermally The subcutaneous route proved disastrous in his experience He explains the reasons for this superiority of the intradermal technic It allows the organism to be tuberculinized without risk when it would be absolutely refractory to subcutaneous injections with which the whole dose passes at once into the blood He describes the technic for this 'mantousation" as he calls it, and states that ten years of tuberculin treatment have convinced him of its reliability and efficacy with localized tuberculosis processes in infants and children But if the tuberculosis is generalized, there is no chance for tuberculin treatment to be effectual, and he regards it as contraindicated if there are any certain signs of general tuberculosis His experience with Roentgen treatment of tuberculosis in infants was still in a tentative stage, but the results were encouraging with tuberculous glands and tuberculous otitis, and the treatment is worthy of a trial, at least with osteitis One infant with tuberculous peritonitis and a tuberculous process in the apex had the apical lesion exposed to the Roentgen rays three times at eight day intervals Necropsy showed the apical lesion arrested and practically walled in but the thymus was atrophied If the Roentgen rays are responsible for this atrophy of the thymus, Roentgen treatment in this form is contraindicated for infants

Paris Médical

April 14 VII No 15 pp 293 308

48 *Sugar in the Cerebrospinal Fluid in Acute Meningitis G Laroche and J Pignot—p 293
49 War Fractures of the Elbow (L hemi resection humérale par la voie laterale externe.) Monprofit and L. Courty—p 298
50 Paralysis from Compression by Army Puttees (Paralysie du nerf sciatique poplite externe due a la compression par la jambiere) A Mouchet and B J Logre—p 303
51 Treatment of Keloids H Gougerot.—p 305

48 **Sugar in the Cerebrospinal Fluid with Acute Meningitis**—Laroche and Pignot have been making a systematic study of the sugar content of the cerebrospinal fluid in patients with various diseases and they assert that the modifications in the sugar content may prove very instructive in certain cases Just as the sugar content of the blood drops and disappears during acute infectious diseases, the sugar in the cerebrospinal fluid may fluctuate in the same way The findings in the blood and fluid are generally parallel and are to be interpreted in the same way They do not think that the fluctuation in the two is simultaneous, but they are inclined to accept a local and independent mechanism for each Glucose seems to stand midway between the extremely diffusible substances, such as urea and sodium chlorid and those which do not diffuse readily The variations in the glucose content of the cerebrospinal fluid are evidently directly connected with the infection of the meninges, like the changes in the cells and the albumin They urge that the test for sugar in the fluid should become a routine procedure along with the cell count and the test for albumin Medical biology can never be too rich in symptoms They tabulate the findings on repeated tests in cases of acute meningitis In the meningococcus cases the sugar disappears more or less completely from the cerebrospinal fluid as the acute infection becomes installed, it reappears toward the fourth or fifth day in the favorable cases and disappears or becomes much reduced again as a relapse impends On the other hand the sugar content of the fluid does not fluctuate when disturbances are observed for which the serotherapy is solely responsible It thus serves to differentiate these conditions when by the symptoms it is impossible to determine whether the disease is flaring up again or the trouble is a kind of serum sickness A low sugar content in the cerebrospinal fluid persisting low as the disease continues, is an unfavorable sign as is shown by concrete examples

All that is needed for the test is a test tube and Fehling's solution Three drops of Fehling's solution are added to 2 c c of the centrifuged or filtered cerebrospinal fluid and brought to a boil over an alcohol flame If the blue persists, the findings are negative, but if there is distinct and prompt precipitation the reaction is positive Sometimes the blue disappears without a precipitate forming there is reduction of the copper but no precipitation This corresponds to a notable reduction of the sugar content without its having entirely disappeared from the cerebrospinal fluid. This weakly positive reaction was never observed with a normal fluid The findings with this test are qualitative and not quantitative but they are exact enough for the purpose as a rule

Presse Médicale, Paris

April 5 XXI No 20 pp 201 208

52 Cases of Rat Bite Disease in France. (Les cas français de sodoku) I Roger—p 201
53 Treatment of Fracture of Several Ribs (Les enfoncements de la paroi thoracique) J Fiolle.—p 202
54 Application of Carrel Method in Treatment of Acute Mastoiditis C Mahu—p 204

52. **Rat Bite Disease**—Roger remarks that in the European cases of sokodu that have been published the diagnosis was only retrospective until Fievez last year recognized the affection in a woman of 66 in the war zone, and Roger's two cases since in soldiers He cites instances of the disease in America, England, Germany and Italy Rat bites are common in the trenches, he says, but evidently only a few rats are infected, as no symptoms were noted after the other bites He has found in the *Union Médicale* of Oct. 25, 1884, a description of an intoxication following a rat bite which corresponds in every respect to the typical clinical picture of severe sokodu of the Japanese writers

54 **Carrel Treatment of Acute Mastoiditis**—Mahu relates that irrigating and draining according to Carrel's technic shortened the course of treatment by two-thirds in his experience It is a kind of bridge between the old methods of treatment and closing the wound at once after the operation, thus interposing a useful and prudent period of watchful waiting before definitely suturing the wound One or two teaspoonfuls of the Dakin fluid are used in the irrigation every two hours, under a pressure of 60 or 80 He changes the dressings every day, and each time examines a specimen of the discharge first dried and stained with phenolized thionin, 1 1,000 When the germs in the discharge are reduced to an average of one to the microscopic field, he thinks it is safe to suture

Beitrage zur klinischen Chirurgie, Tübingen

May 1916 C No 1 pp 1 128 Last indexed May 26

55 Treatment of War Wounds H Fehling—p 1
56 Asepsis vs Antisepsis with Fresh Infection of Wounds A. Hamm—p 12
57 Open Treatment of War Wounds. G Seefisch—p 19
58 *Transfusion of Blood G Hotz—p 32
59 Aneurysms from War Wounds Gebele.—p 35
60 Surgery of Blood Vessels H F O Haberland—p 52
61 Skull Wounds (Schadelschusse.) E Erdelyi—p 57 F Muller—p 73
62 Wounds of the Chest. (Brustschusse) H Kehl.—p 98
63 Immediate Primary Suture of the Wounded Lung under the Overpressure Procedure F Landois—p 111

58 **Transfusion of Blood**—Hotz relates that he utilized the donor's brachial artery, instead of the radial, for transfusion of blood in eight cases and found it much more convenient for several reasons He never had any mishap in his twenty transfusion cases, even when the pressure in the donor's other arm dropped as low as 90 mm. mercury If the donor collapses, his head is lowered and the legs wound with an elastic bandage The acute consequences from the loss of blood soon pass away but there may be a little weakness for a few days If one has time to prepare the donor he says it is a good plan to have him drink copiously a few hours before the transfusion During the transfusion he had better refrain from drinking for fear of vomiting In three of his cases there seemed to be thrombosis as the radial pulse could not be felt for a few days, but then it returned although a little weaker than on the other side The size of the brachial artery simplifies the whole procedure, but this artery should never be used except by an expert Otherwise it is best to draw the blood, citrate it, and infuse it like saline

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 14 XLVII No 15 pp 449-480

64 *Operative Cure of Paraplegia of the Legs from Spinal Cord Tumor H. Brunschweiler—p 449
65 Plant Extracts Alleged to Contain Vitamins (Beitrag zur Kenntnis der pharmakologischen Wirkung der Vitamine) F Uhlmann—p 464

64 **Spinal Cord Tumors**—A man of 35, a house painter, was brought to the hospital with total paralysis of both legs Lead poisoning was supposed to be responsible for the paraplegia as the man had had attacks of pain at times during the last seven years which had been supposed to be lead colics The Wassermann test was negative The paralysis developed slowly, with sensory disturbances and the retrospective diagnosis was a transverse lesion of the spinal cord The unilateral pains interpreted as lead colic, had been the only symptom of the tumor for seven years By exclusion and neurologic tests an extradural tumor was diagnosed, compressing the spinal cord at the seventh, eighth and ninth dorsal segments and the sixth and fifth right roots Roentgenoscopy revealed a tumor in the lung close to the spine

bevolking van ruim 6 millioen menschen meer dan 3 millioen koeien telt) Rotterdam has a model dairy which gets 1,500 florins a year from a charity fund to pay the difference between its model milk and ordinary milk, when the family physician gives a certificate to that effect to a poor family Even with this subsidy, the milk is sold at a loss, but the model dairy is regarded as an important educational institution as it attracts visitors from far and near Even in peace times the bottle containing ¾ liter of this model milk sells for 17½ cents (*Terwijl in vredestijd ¾ Literflesch voor 17½ cent wordt verkocht, kan de mingegoede deze verkrijgen voor 12 cent*)

108 **Extraction of Small Foreign Body from Anterior Chamber**—Koster discusses the preferable technic, emphasizing particularly what must not be done, both with metal and nonmagnetizable foreign bodies For a very small splinter of metal, the entering wound already closed, he introduces a Graefe knife in a radial direction, at the extreme periphery, cutting thus around the edges He then presses down the scleral lip of the incision with the hand magnet, and the scrap of metal soon comes into view and is drawn out With other technic the scrap is liable to be held back by iris tissue Even a strong magnet is not able to extricate it then The mistake is often made that the incision is made too much in the cornea, or some other instrument is used instead of the proper Graefe knife The smaller the metal particle, the harder it is to remove, as a rule

If there is a piece of the same glass at hand in case of a glass splinter in the eye the glass can be tested to see if it casts a shadow under the Roentgen rays He warns that no attempt must be made to extract nonmagnetizable foreign bodies through a straight incision, and that surgical pincers must not be used to seize them, for reasons which he enumerates The opening by which the foreign body entered must be enlarged or, better yet a new angular opening made to form a flap that can be lifted up with a sharp hook The Graefe knife is the instrument to use, and it may be advisable to make a third incision to get a square flap, aiming to have the base of the flap on the side of the limbus When the foreign body is thus exposed, he seizes it with fine anatomic pincers A triangular or square flap injures the eye less than groping around through a straight incision Even if extraction fails the first time, it is better to try again than to advise enucleation In conclusion he describes a case of a piece of glass in the anterior chamber An ophthalmologist made an incision with a lancet and tried to seize the glass with iris pincers but there was some bleeding and the foreign body escaped out of sight, the blood and pigment concealing it Koster advised waiting and Roentgen examination Four days later he made an incision 8 mm long through the cornea on the side toward the nose, using a fine Graefe knife held perpendicularly, cutting from within outward Then with curved tenotomy scissors, the cornea was cut perpendicularly to this for 6 mm The flap was drawn back with a hook and the lens mass and the scrap of glass pressed up into the opening, and the glass was readily grasped with fine but strong anatomic pincers There was no loss of vitreous humor The nasal conjunctiva was loosened up and drawn over the wound in the cornea and sutured A light compressing bandage was applied and the young man kept in bed The eye healed favorably with 1 per cent atropin For six weeks a bandage was applied at night Vision was then 6/60 A year later there was still some traumatic mydriasis but the visual field was good and there were no disturbances

109 **Cure of Polyneuritis in Fowls**—Pol thinks that he has isolated the active principle in the East Indian bean plant which supplies the substance the lack of which induces beriberi in man and polyneuritis in fowls The physicians of Netherlands India have published several communications extolling the efficacy of the beans of this plant, katjang-hidjoe or *Phaseolus radiatus*, in treatment of this deficiency disease in man and fowls Pol at Utrecht has isolated from a decoction of these beans crystals of an acid which he calls *x* acid It promptly cured four beriberi patients, and several fowls with experimental polyneuritis, but the quantities had to be surprisingly large It is evident, he says, that the more this kind of substance is chemically purified the less efficient it becomes

111 **Intravertebral Tumors**—The successful removal of the large tumors in the two cases reported should encourage treatment in apparently desperate cases The excised tumor was 7 cm long in one case, but in neither of the cases were there symptoms on the part of the spinal roots The pains between the shoulders in one case were evidently due to irritation of the vertebral periosteum The Nonne reaction in the cerebrospinal fluid was positive, but there was no lymphocytosis and the Wassermann test was negative in both blood and fluid The Pirquet test elicited a positive reaction, but no signs of tuberculosis otherwise were found One tumor seemed to be a sarcoma the other a mass of granulations but inoculation of guinea-pigs gave negative results

Hospitalstidende, Copenhagen

April 11 LX No 15, pp 345 368

112 *Extensive Peripheral Gangrene in Syphilitic Man of Thirty Seven H I Schou—p 345

113 Present Status of Means to Estimate Degree of Acidosis in Diabetes (Et Par af de Maader hvorpaa Graden af Syreforgiftningen ved Sukkersyge kan søges afgjort.) K A Heiberg—p 357

112 **Raynaud's Disease in a Syphilitic**—Schou's patient is a clerk on a steamship After scarlet fever at the age of 7, he had a transient gangrenous affection of the fingers of both hands, and the tip of one finger sloughed off Except for acute gonorrhea at 25 he has been well although somewhat neurasthenic and inclined to chilliness and numbness Two weeks before entering the hospital his nails looked blue and there was considerable pain in the extremities Gangrene speedily developed and extended to the root of the thumb in one hand and to the knuckles in the other, while the toes on both feet were likewise but less severely affected The rapid development and extent of the gangrene the hematuria observed with polycythemia, slight hyperglykemia and the positive Wassermann reaction were the special features of the case There was no hemoglobinuria but the hematuria persisted for nearly three weeks after the beginning of the attack Schou has found records in accessible literature of thirty-eight cases of Raynaud's disease in syphilitics, there was manifest syphilitic arteritis in sixteen of them, the syphilis was dubious in eight others and certain in fourteen In conclusion Schou urges investigation of the glands with an internal secretion in every case of Raynaud's disease as this may throw light on the puzzling affection Also he urges postmortem examination of every person known to have had Raynaud's disease.

Ugeskrift for Læger, Copenhagen

March 29 LXXIX No 13 pp 475 514

114 *Physiologic Standardization of Digitalis M Krogh—p 475

115 Present Status of Knowledge in regard to Foods and Dietaries M Hindhede—p 491 To be continued

114 **Standardization of Digitalis**—This work issues from the laboratory for experimental physiology of the University of Copenhagen Krogh reviews the history of the application of digitalis in therapeutics and the attempts to standardize it effectually A method of standardization is described which seems to be more dependable than any other The tabulated details of the experiments and parallel tests apparently confirm the advantages of the method proposed The test is made on the isolated heart of the frog determining the lowest concentration which arrests the spontaneous rhythm The research reported has shown that the hearts of the brown and the green frog, *Rana temporanea* and *Rana esculenta* behave differently in response to this drug The heart of the former absorbs a certain amount of the active principle Consequently the *Rana esculenta*, the common frog is the one to use, although the other frog heart may prove useful as a control With the esculenta the preparation of digitalis or strophanthus can be estimated within 10 per cent of strict accuracy

The Journal of the
American Medical Association

Published Under the Auspices of the Board of Trustees

Vol LXVIII, No 23 CHICAGO, ILLINOIS JUNE 9, 1917

WAR'S INFLUENCE ON MEDICINE

PRESIDENTIAL ADDRESS *

CHARLES H MAYO, M D
ROCHESTER, MINN

AMERICANISM

The medical profession should feel proud of the position it has attained in the affairs of the world It has been second to none in its progress, and medicine has now become nearly an exact science The exalted position of medical men throughout the world's war has become accepted and has given them an opportunity to apply wholesale, as it were, the newer methods of prevention and treatment of disease by adopting at once fixed medical standards The enormous value of this practical application relieves the necessity of a slower advance by discussions with the ignorant and by overcoming obstructionists Hundreds of our medical men, appreciating the needs of the people as well as the requirements of soldiers, have long since accepted medical service to aid humanity in all of the countries of Europe

The medical profession was first to mobilize, and has been signally honored by the government in having given to it the first flag to be carried abroad, thus signifying our country's active entrance into the war No worthier representative of the profession could have been chosen as standard bearer than Dr George W Crile, who had done so much to develop the base hospital idea These accomplishments give us a right to discuss Americanism As a people we cannot accept the Prussian point of view that war is of divine origin, and that those killed in waging it pass immediately to Walhalla We are more than ever firmly convinced that war is what Sherman called it, and made of it, Hell In beginning and conducting war, autocracies, government officers and soldiers each have responsibilities In all the world's history war has occurred at fairly regular intervals, and the great steps of man's progress have been closely associated with it through advances made by autocratic order and accepted through discipline The very fact that a people can respond to so great a catastrophe as war shows that they are capable of the progress which will result regardless of the human sacrifice Russia has started on her freedom along these same lines, to be ultimately united only through either the present war or an internal revolution Autocracy and imperialism are hanging in the balance, and the scale will turn with education and opportunity for the people Our own nation has never been in any war of conquest, having fought only for the "rights of life, liberty and the pursuit of happiness for all," and paying for all territory taken War gave us freedom, our institutions, and the consolidation of our states, it gave to the world the freedom of the seas, and it gave to Cuba the same liberty that is in time to come to the Philippines and other of our possessions Our war of freedom was instrumental in effecting such changes in the governing methods of our mother country — England — that she has since so endeared herself to her other colonies that they have freely bled themselves white in their loyal support of her Our original displacement of the Indians must be regarded as being somewhat similar, though much more humane, than Germany's attempt ruthlessly to stamp out what it considers weaker, nonaggressive or decadent people who, from its point of view, are wasting the world's supplies Germany plans that her defeated opponents are to be restored to usefulness by "Kultur," a proposition the value of which is open to discussion

In our own country our constitutional form of government is founded on personal liberty It is stronger for its just recognition of property rights, and ultimately the will of the people prevails Since the framing of the constitution, thirty-two millions of emigrants have come to our country Those who came early aided in developing it from the wilderness, and at once became loyal citizens Those who came late, to obtain opportunity and material benefit and to avoid the restrictions, oppressions and conscriptions of their own countries, are not truly our citizens, becoming so only in the second generation The state, acting as our monarch, controls the rates and the taxes It provides for the care of the helpless, deficient and insane It protects the health and lives of its people, is constantly working to benefit all by such acts as the compensation law, and is now discussing a modification of the compulsory health insurance of Germany and England

The great industries have in the past unnecessarily destroyed thousands of human lives and turned on the public many more thousands of cripples dependent on public charity It has been cheaper for these industries to let Europe pay the cost of bringing individuals to maturity and to replace the injured and lost with new human material than to go to the trouble and expense of providing suitable means for protecting the lives and limbs of employees Today we are face to face with the truth that we must arise and upbuild our own people The economic law of supply and demand has gradually been brought into force, and the waste of human life must cease We hear on every hand of projects and efforts for the conservation of human life, a movement which is not the outcome of any philanthropy or sentiment but of neces-

---

* President's address before the American Medical Association at the Sixty Eighth Annual Session New York June 1917

sity Men can no longer be replaced with the old time ease, and their individual value to the community has increased accordingly

Economic necessity, not sentiment, has given almost sovereign power to health departments, both state and municipal The physical condition of schoolchildren is being looked after under the supervision of physicians and trained nurses, and even food is being furnished that the young may develop well and grow strong to do the world's work To prevent sickness among those who are well and bring the young to maturity with health and education is the most important business of the state

The evolution of many large institutions has come about through the development of the by-product The by-products of human deficiencies, mental, moral and physical, are a clog and a burden to the state In our great hospitals for the insane we find that much effort is being made by highly organized and expensive methods to reclaim the mentally affected These institutions have become not the madhouses of the past, but hospitals for the mentally sick The expense is great, the percentage of cures small, but well worth the effort University and state hospitals are needed for the care of the poor, for curing blindness, and for restoring cripples and defectives from birth and injury to health and usefulness Now that the war is producing injuries by the thousands, a new impetus is given this work, that by training in special employment and artificial aids such persons may be as happy as possible and self-supporting, and not mentally affected and a drag on the community It is through organized effort in the medical profession that so many of these great things of the world's work have been accomplished Within half a century, many years have actually been added to the average life of man This has been largely accomplished by preventive medicine as well as by advances in the cure of disease

The American Medical Association has an advisory committee under Dr Alexander Lambert investigating the question of compulsory health insurance for the information of the profession Such laws being meant for the general good of the people, physicians should not obstruct, but should discuss and help in devising methods whereby the needy will receive aid, the middle classes will not be pauperized, and this without detriment to the medical profession Anything which reduces the income of the physician will limit his training, equipment and efficiency, and in the end will react on the people

One of the greatest functions of a state is the development and control of its educational system Compulsory school attendance and child labor laws have been necessities It will soon be generally recognized that the citizen is best made when a child Compulsory school attendance through the seventh grade and a general knowledge of the English language are necessary to this citizenship Other languages than English are special studies Private schools should be encouraged, but all should be subject to state inspection and control Private schools conducted by hyphenated Americans should be subject to government inspection to remove them from the protective influence of local and state politics The lack of unity of our nation is largely due to lax educational laws which allow emigrants to develop community and educational interests in the language of their fatherland and not to live up to our constitution As a people our prestige in the world has been injured most unfortunately by the petty jealousies and the local interests which have been made general through intrigue and political effort Especially have we decried to the world the acts of government officials whom we ourselves have placed in power More good would come to our country through tongue control than birth control Our best people must come to the fore, and if necessary, by self sacrifice, do their part in the political management of the local, state and general affairs of our country if democracy is to survive A wise monarch in Europe has remarked that it is surprising how often Americans seem pleased at being mistaken as coming from some other country Our emigrants from all countries desire opportunity for expansion, thought and individualism With opportunities, their brain cells create great inventions and ideas It is most natural that such people should develop in this country of opportunity, and it is just as natural that much of the new thought in the world's progress after the next two generations may come from the Siberian people

In a review of the world's progress in the last hundred years, the wonderful part our country has played in it is at once manifest Man's power to control the elements was developed in America Franklin was the first to draw electricity from the clouds Morse developed the telegraph, Field laid the first cable, and Tesla, through his American education and opportunity, developed electric control We still thrill at the story of Fulton's first steamboat, the *Claremont*, on the Hudson river The Howe sewing machine took sorrow from "the song of the shirt" Alexander Bell developed the telephone, and Edison the phonograph, Holland developed the submarine, while Langley, followed by the Wrights, gave us the airship The typewriter, the adding machine, and nearly all mechanisms, systems and inventions for conserving time and increasing productiveness have been American in origin Within scarcely fifty years, modern farm machinery — planters, seeders, mowers, reapers, binders and threshers — has here increased man's ability a dozenfold, while in Europe the sickle, the cradle and the flail are still being used

I bring up these things here because the great medical profession of this country has not stood as a united body for that which is American in medicine Many, while abroad, have apologized for medical conditions at home, and for personal advancement have often written of and discussed as remarkable European discoveries that are trivial Many important discoveries in medicine in America have not been accepted here until they have been appropriated by Teutons and returned to us with the stamp, "Made in Germany" Our country has done much for the advancement of the medical profession through the enactment of just laws requiring standards of education Through the efforts of the Council on Medical Education, of which Dr Arthur D Bevan is chairman, our profession has largely aided in the standardization of medical colleges Through the work of this board, many of the inefficient medical colleges have been forced to close, to the great ultimate good of medical science and of the people served by their graduates The added requirements of preliminary education and increased years of medical study were so great, however, that with the elimination of 40 per cent of the colleges, and the years of study more than doubled, we have little more than one-third as many students of medicine now as in 1900 Fewer doctors, better trained nurses to take some of their work, better educated people, and preventive medicine to reduce sickness maintain an even balance, however Now will come a hysterical demand to lower the bars of educational medical requirements under pretext of the necessity of war It must not be permitted If ever we need educated men it is now, and they will continue to be needed

To our credit it may be said that today our graduates in medicine by education and training are equal to those of any country, and better than those of most countries of the world The cost of conducting medical schools is so great, as compared with the fees received, that they may be conducted only by richly endowed colleges or state universities It costs the state of Minnesota $4,200 to educate a physician, but its people are well paid for the expense incurred as they receive the best medical care Minnesota now stands fourth among the states in health service for the people, and was the first to inaugurate state board examinations to regulate the practice of medicine However, the standard for the practice of medicine is now high in most states, and here I would pay tribute to the excellent work of the National Board of Medical Examiners developed through the efforts of the late Dr William Rodman while president of this Association In some states, through local or state influence, many forms of the practice of medicine have been given separate boards of examiners, based wholly on lines of treatment There should be no examination as to the method of treatment Ultimately, when, as the result of existing laws, general standards of education are higher, public demand will require that all who practice the healing art shall be tested on educational lines, both general and special, the latter wholly on the knowledge of the facts of anatomy, histology, chemistry, sanitation, preventive medicine and the diagnosis of disease but not on treatment, before permission is given to care for the lives and health of the people

During past centuries medicine has advanced slowly, but quite as rapidly as other lines of endeavor The wonderful advance of the world's affairs during the last century, and especially in the latter half of it, has given us a new world in thought and productive activity In medicine this has been especially true in the development of our knowledge of the bacterial cause of disease and its prevention and treatment How proud the French are of the wonderful part Pasteur played in the discoveries and investigations that disclosed a new microscopic world of life! We now know that to bacteria is due the essential chemistry of existence, as they maintain life by changing inorganic material into solutions for plant food All multicellular organisms, both plant and animal, are subject to disease and destruction through the action of the single cell organism Our progress in the world's work will be to recognize and classify bacteria, to propagate and train them to become man's true slaves, and to control, render harmless or destroy those destructive to life The French, through Madame Curie, gave to us the knowledge of radium England is proud of Lister, who elaborated the work of Pasteur into a benefit to surgery, showed that infections are caused by bacteria, and thus developed antiseptic surgery There also was developed the Crookes tube, the penetrating rays of which were accidentally discovered by Roentgen of Germany, from the fact that photographic plates in the room were affected by them

We have all benefited by Germany's elaboration of scientific problems, especially by her proof to the world of the benefit of teamwork and organized national discipline over the efforts of the individual It can be said of many scientific discoveries that they were thought of years ago by men who lived before their time, as it were, yet credit must go to those who overcome resistance, educate the people and compel acceptance From a medical standpoint we must be proud of our country and our great dead The work of McDowell of Kentucky, who performed the first ovariotomy in 1817, and the impetus to medicine given by Gross, Rush, Simms, Emmett, Senn, Davis and J B Murphy, our former president, and a host of other distinguished dead who added so much to our knowledge of medicine, are known to the world What a debt we owe to Long for his discovery of ether, which made surgery possible and childbirth easier!

We are proud of our agricultural department and its investigations as to the causes, control and cure by serums of the diseases of animals and the destruction of parasitic hosts The work of Erwin F Smith on plant diseases is monumental, especially his discoveries as to the cause of certain plant tumors which show again that our bacteria and insect chemists are the prime offenders through the development of their varying acids, which may be stimulating or destructive to other cell life, causing tumors or decay We should appreciate and aid the work of these departments

EDUCATION

Whereas a hundred years ago the educated man could acquire the bulk of all that was known, it is now commonly recognized that the world's knowledge is so extensive that the more general an education a man receives the more hampered he may be, unless he is also highly educated along some particular line There are specialists in every line of human endeavor, the educator, the professional man, the business man, the farmer and the laborer Flexner is right in his effort to bring about a change in the prevailing system of education, founded as it was in the monk's period of the world's progress It is proper to adjust education to man's requirements and necessities of today Already some of the preparatory schools have started a propaganda against even the trying out of experimental changes in educational forms The graduating age of 29 in medicine is four years too late, as the most productive and ideal period of thought is thereby limited to too short a time The graduate's best work must be accomplished in the next fifteen years, when his brain cells are most energetic and receptive It is well to remember that death overtakes the average physician at the age of 58 The intellectual man and woman marry late or not at all, and the resulting birth rate does not exceed one third of their original number In order that the physician may be graduated at the age of 25, his vocation should be chosen in the seventh year of school life in order that special lines of study may be begun, and the eighth grade, the work of which is a review, should be eliminated A revision of the time devoted to a study of the classics is necessary The work of the last year of high school and preparatory school should not be reviewed in the first year of college, thus saving two years By proper specializing in a six or seven year combined course of college and medicine, the student should be entitled to two degrees, such as are now given in the University of Minnesota

Medicine has been divided into many branches and, of necessity, diagnostic team work has developed, with the result that both the rich, who can pay, and the very poor, who cannot pay, secure the best possible service To secure equally good service for the great bulk of the people, however, some change in diagnostic methods by the establishment of centralized plants, hospitals for diagnosis, or combinations of those engaged in specialties to care for the extraordinary cases is necessary

WORK OF ARMY MEDICAL OFFICERS

War has always had a great influence on medicine, first developing the priest physician, then the barber surgeon, and later the army medical officer In war time Paré devised the ligature for arteries, although he was not the first to employ it Napoleon, who was often at a loss to supply his army with food, made awards, which from an empiric and practical standpoint developed canning and the preservation of food before bacteria were known The American medical profession will ever be under obligation to our army medical officers for their services to the world in the discoveries of numerous diseases, their causes and prevention Our army medical officers stand preeminent in science To Beaumont we are indebted for the first report on digestion, digestive fluids and gastric movement from direct observation of a patient with gastric fistula To Surgeon-General William Hammond we are indebted for the development of the army medical museum, the second in the world Surgeon J S Billings fostered the second largest and the best medical library in the world Surgeon-General Sternberg discovered the pneumococcus and founded the army medical school and the government laboratories of bacteriology and hygiene Under Sternberg's administration Major Walter Reed, with James Carroll, Jesse W Lazear, and Aristide Agramonte, proved the mosquito to be the agent transmitting yellow fever Lazear lost his life from the disease during the investigation To these men belongs the credit for the control of yellow fever throughout the world, although the theory had been advocated by J D Nott in 1848 and Carlos Finlay in 1881 Through the knowledge obtained by this board and the sanitary and hygienic investigations of the Army Medical Service, General Gorgas, a former president of this association and now surgeon-general of the army, was able to free Havana of contagious disease Yellow fever disappeared from Havana for the first time in 150 years Under the supervision of General Gorgas the Panama Canal zone also was freed from both yellow fever and malaria The latter was proved to be a mosquito-borne disease by Major Ross of the British army This sanitary work made possible the building of the canal, and the health conditions in Panama are now better than in our own country To Robert Maitland O'Reilly, one time surgeon-general of the army, we are indebted for the reserve medical corps developed for the expansion of the medical service during the time of war, and under which several thousands of us are now preparing to do our bit Under Surgeon-General George H Torney was instituted the first compulsory vaccination for the prevention of typhoid This was made possible by the discoveries of Chantemesse and Widal in France and Sir Almroth Wright of England, though to Major Frederick F Russell of America is largely due the credit of its development On the Mexican border Major Russell has vaccinated more than 20,000 United States soldiers at one time and put a stop to typhoid To understand fully what this means, we must realize that the medical army service is as much a specialty in the care of soldiers as any specialty can become In almost impossible conditions and surroundings to prevent and care for disease and infections, employ all of the serum and vaccines known, and be fully conversant with all sanitary and hygienic laws requires, indeed, special training During the Spanish War, 20,000 cases of typhoid occurred among our troops in training camps between May and September, 1898 Of the volunteer soldiers, 90 per cent developed typhoid within eight weeks of camp life Investigations by Majors Walter Reed, Victor Vaughan, a former president of this association, and Edward Shakespeare did much to demonstrate the methods by which diseases are transmitted by flies and human carriers, and also by utensils and camp pollution In our volunteer army in Cuba, 450 soldiers were killed, and 9,853 died of disease The benefit to our country after the present war in having some thousands of medical officers trained in sanitation, hygiene and the prevention of disease will be incalculable Through lax examinations of recruits and the natural effects of prolonged life and overcrowding in trenches and underground structures, tuberculosis will become a menace to our soldiers, as it is today in France

In the American occupation of Porto Rico in 1898, smallpox, which was always present, became epidemic, 3,000 cases occurring in two months By order of Governor-General Davis and under the direction of Major John Van R Hoff, the island was absolutely rid of the disease by the vaccination of all the inhabitants, more than 800,000 people In Porto Rico, Captain Ashford and his board have treated over 300,000 people for hookworm disease, reducing its mortality 90 per cent A similar work with like results has been carried on in the Southern States through the generosity of Mr Rockefeller through the work of his foundation, largely aided by the army medical and public health services Mention should be made also of the work done by army medical men in the study of pellagra Beriberi has been eliminated from the Philippines by the investigations of the preparation of rice made by Captain Edward Vedder Surgeon-General Torney advocated the Army Dental Corps and the Army Corps of Nurses The present war is one of remarkable proportions, and the medical service has assumed an importance such as it never had before The old army hospital gangrene is a thing of the past A knowledge of the care of infections, prevention of tetanus, vaccination for smallpox and typhoid, the cause and prevention of typhus, the old camp fever, also cholera, the plague and fevers of all sorts, including the new trench form, is a training requirement of the army medical officer, and results in the restoration to duty of a high percentage of the injured

The requirements of our profession have been raised from within, and not forced from without The American College of Surgeons deserves great credit for establishing its high standards for the science of surgery and the honesty of the surgeon Through immediate necessity, hospitals are rapidly being classified and standardized that they may become more efficient for the people and for the training of nurses and future physicians As a body, no profession has more power if wisely used We have at once jumped past the period of discussion with fanatics and cults as to the cause and prevention of disease, a long period in medical history, for today disease can be checked by order Our country should secure a medical cabinet officer in the near future

We must aid in all that will elevate the general standard of, and conserve, the American citizen Prohibition is a war measure the value of which is beyond discussion That disease was frequently water-borne is a practical observation that has existed for many centuries To a large extent among the Orientals the danger of such transmission was overcome by the drinking of tea and coffee purified by boiling In Europe the same results were obtained in the manufacture of weak wines, brews and liquors, the fermentation and yeast germs of which destroyed the virulent bacteria Now that we know how and why water was dangerous, the necessity especially of alcoholic drinks has been removed in every community in this great country by an abundance of pure water No one except the policeman sees more of the results of overindulgence in alcohol, demonstrated by poverty, sickness, immorality and crime, than the physician Medicine has reached a period when alcohol is rarely employed as a drug, being displaced by better remedies Alcohol's only place now is in the arts and sciences National prohibition would be welcomed by the medical profession

American dentistry has made a place for itself in the world, and America stands at the head of all countries in the care of the teeth We are all proud of the work of American dentists We may pay our tribute also to the American nurse, who has distinctly elevated the nursing of the world and care of the sick Her experience and training make her the best wife and mother and a leader in support of the best in education and discipline in her community

It is most fortunate that our army medical service is in the hands of three of our ablest men, Surgeons-General Gorgas, Braisted and Blue, and we must laud the work of the general medical council under the able directorship of Dr Franklin Martin The Journal of the American Medical Association, under the direction of Dr George H Simmons, has been an important factor in the education of the American physician

Medical men, your country needs you now and always You must remember that the state is permanent and does not exist for the good of the individual, but that the individual exists for the good of the state

---

Industrial Accident Mortality in 1916—On the basis of 9 million white persons insured in the industrial accident department of the Metropolitan Life Insurance Company during 1916 it is found that the accident rate for the working people of the United States increased 5 points per hundred thousand over 1915 The tendency has been toward a decrease in the past few years, the 1916 increase is attributed to activity in industry and speeding up processes incident to war conditions The death rates per hundred thousand persons exposed during 1916 and 1915 respectively, in the classes of accidents named were accidents and unspecified violence, 73 5 and 68 9 burns, 8 4 and 8 1, absorption of deleterious gases, 3 0 and 2.5, accidental drowning, 9 5 and 11 9 (the figures for drowning in 1915 include those of the *Eastland* disaster), traumatism by firearms, 1 6 and 1 4, cutting or piercing, 0.2 and 0 1, by fall, 13 7 and 12 4, in mines and quarries 1 0 and 1 0, by machines, 1 6 and 1 4, by steam railroads 7 6 and 7 3, by street cars, 2 6 and 2 3, by automobiles 8.8 and 5 7, by other crushing and other vehicles 3 4 and 3 5, electricity 1 0 and 0.7, other accidental and unspecified external causes 11.2 and 10 7

TRANSFUSION OF BLOOD BY THE CITRATE METHOD *

V P W SYDENSTRICKER, M D
V R. MASON, M D
AND
T M RIVERS, M D
BALTIMORE

Anticoagulants have been of great value and interest to laboratory workers for many years, but their introduction into clinical medicine is of recent date Engelmann,[1] in 1911, stated that he had injected 0 3 gm of herudin intravenously in each of fourteen eclamptic patients without toxic symptoms Satterlee and Hooker[2] used small amounts of herudin in transfusion with their cannula-pipet method, and observed no ill results Abel, Rowntree and Turner,[3] working on methods of vividiffusion and plasmaphaeresis, concluded that herudin prepared by their method was nontoxic in quantities sufficient to prevent coagulation of the blood of dogs Turner, Marshall and Lamson[4] studied a commercial preparation of herudin and found it sufficiently toxic to cause death in dogs when given intravenously in doses of from 25 to 30 mg per kilogram of body weight Marshall[5] studied this preparation and concluded that the toxic substance was probably some product of putrefaction Herudin was used as an anticoagulant in a plasmaphaeresis performed on a uremic patient in this hospital It was followed by marked collapse from which the patient recovered after prolonged stimulation It has not been used subsequently as an anticoagulant in human beings, and should not be used before careful biologic standardization of the preparation has proved it innocuous

Yurewitch and Rosenberg[6] used sodium citrate successfully as an anticoagulant in washing and returning erythrocytes to the circulation of rabbits Hustin[7] reported the result of a transfusion in a human being in which the blood was kept fluid by means of 0 2 per cent citrate and mixed with an equal amount of physiologic sodium chlorid solution containing glucose before injection This method has the disadvantage of a large fluid transfer Weil,[8] in 1914, stated that he had successfully transfused human beings with as much as 250 c c of blood kept fluid by means of sodium citrate (amount not stated) He also observed the remarkable fact that the recipient's blood showed no lengthening of coagulation time after transfusion Lewisohn[9] described "a new and simplified method of blood transfusion" in which he prevented coagulation by means of 0.2 per cent of sodium citrate Weil[10] recommended the use of one part of 10 per cent sodium citrate solution for nine parts of blood Garbat,[11] working with W Meyer, in the treatment of thrombo-angiitis obliterans, reported that the intravenous injection of 2 gm of sodium citrate was occasionally followed by fever and chilly sensations He recommended the use of blood containing 0 25 per cent citrate in transfusions

---

* From the Medical Clinic of the Johns Hopkins Hospital

[1] Engelmann Ztschr f Geburtsh u Gynak. 1911 **68**, 640

[2] Satterlee H S and Hooker R S The Use of Herudin in the Transfusion of Blood, The Journal A M A June 1914 p 1781

[3] Abel Rowntree and Turner Jour Pharmacol and Exper Therap, 1914 **5** 275 625

[4] Turner Marshall and Lamson Jour Pharmacol and Exper Therap 1915 **7**, 145

[5] Marshall Jour Pharmacol and Exper Therap 1915 **7**, 157

[6] Yurewitch and Rosenberg Russk. Vrach, 1914 **14**, 637 cited by Abel Rowntree and Turner (Footnote 3)

[7] Hustin Ann et bull Soc. méd et nat. Brussels 1914 **4**, 104

[8] Weil Med Rec. New York 1915 **87**, 164 (discussion)

[9] Lewisohn Med Rec. New York 1915 **87** 141

[10] Weil Richard Sodium Citrate in the Transfusion of Blood The Journal A M A. Jan 30 1915 p 425

[11] Garbat A. L. Intravenous Injections of Sodium Citrate The Journal A M A. May 13 1916 p 1543

Sodium citrate is only relatively nontoxic,[12] and it is therefore of importance to use the minimum amount that will certainly prevent coagulation of drawn blood For this purpose, 0 2 gm per hundred c c 'of blood is not always enough, it is better to follow Garbat's advice and use 0 25 per cent

In 1915 Ottenberg and Libman[13] reported 212 transfusions done by the older methods, and fully discussed the results and indications McClure and Dunn[14] collected reports of 150 transfusions performed in this hospital prior to the introduction of the citrate method, and gave a complete account of the historical development of transfusion In this paper, we shall report all of the citrate transfusions done in the Johns Hopkins Hospital and call attention to what seem to be the most satisfactory methods

SELECTION OF DONORS

Robust, young adults, free from disease are, in general, the best donors They should always be carefully questioned concerning previous illnesses, and a Wassermann test should invariably be made on their serum before transfusion Even this will not exclude the possibility of syphilitic infection, so it is better to look for the clinical evidences of syphilis[15] Cardiac patients requiring bleeding for decompensation have been used as donors repeatedly without any ill result An active bacterial endocarditis should always be excluded by blood culture if necessary All transmissible diseases,[16] and, if possible, all other diseases, having been excluded, agglutination tests should be done

Landsteiner[17] and Shattuck[18] independently reported the presence of iso-agglutinins in normal human serums Landsteiner[19] divided human beings into three groups according to the agglutination reactions of their bloods DeCastello and Sturli[20] were able to confirm Landsteiner's results by tests on 174 human bloods, with four exceptions In these the serum contained no iso-agglutinins, while the corpuscles were agglutinated by all the other serums These four are now known to belong to Group I (Moss), although they were not placed in a separate group by DeCastello and Sturli Jansky[21] first proved that human beings fall into four groups according to their agglutination reactions, and Moss[22] was able to confirm his work[23] So far, no exceptions have been found to these groups, and after establishment they are permanent Moss was able to demonstrate isohemolysins in about 25 per cent of normal bloods, but never saw hemolysis occur without previous agglutination

It has now become a routine procedure to test the serums and corpuscles of donor and recipient for agglutination and hemolysis before each transfusion Ottenberg and Kaliski,[24] in a study of reactions following transfusion, concluded that agglutination tests when properly done are reliable, and also emphasized the fact that certain reactions will occur which are not dependent on agglutination and hemolysis, although their nature is not fully known

Repeated transfusions from the same donor to the same recipient have been frequent in the series of cases to be reported, and the reactions in some of these cases will be fully discussed This procedure has never been shown to lead to the formation of demonstrable iso-agglutinins or isohemolysins, in vitro, when properly controlled tests were certainly negative before transfusion Ottenberg, Kaliski and Friedman[25] showed that dogs transfused repeatedly with agglutinable cells will apparently develop isohemolysins, de novo, but that this will not occur when the injected cells are not agglutinable We have not been able to produce isohemolysins or iso-agglutinins in rabbits by repeated transfusions with compatible blood The subject, in view of discordant results by various observers, needs careful study

Brem[26] has reported some interesting results following transfusions with incompatible bloods Four Group II recipients were given blood from Group IV donors, one Group I recipient from Group II donors, and one Group III recipient from a Group II donor In these no severe reactions occurred Two Group IV recipients were transfused with Group II blood, one Group II recipient with Group I, and one Group III recipient with Group I Three of these had violent reactions — one with hemoglobinuria Unfortunately, later agglutination tests were not reported These results emphasize the experience of others and explain the paucity of serious or fatal reactions following transfusion done prior to the introduction of agglutination tests Study of the groups of Moss shows that cells from Group IV can be given to any group without expecting serious reaction

Severe and occasionally fatal reactions have followed transfusions in which careful tests to demonstrate iso-agglutinins and isohemolysins have not been done In view of this, it is dangerous and unjustifiable to do transfusion of blood without careful tests

Halban,[27] DeCastello and Sturli,[20] Moss and Happ[28] showed that groups, as a rule, are not established before the end of the second year of life, although they are occasionally present at birth Clinical experience has shown that it is safe to transfuse infants under 2 years of age with their mother's blood But even in these cases, tests should precede transfusions when possible

---

[12] Lewisohn Surg, Gynec and Obst, 1915, **21**, 37

[13] Ottenberg and Libman Am Jour Med Sc, 1915, **150**, 36

[14] McClure and Dunn Bull Johns Hopkins Hosp, 1917, **28**, 99

[15] In this connection the following brief case history may be of interest A patient with a severe anemia had received several transfusions from his son during a period of two and a half months Three weeks after the last one the patient returned to the hospital for other transfusions The son was used as the donor (A Wassermann test was not made again on the donor's serum, although he was warned of the danger of the transference of syphilis) Four weeks later the patient had a skin eruption and malaise, and a week later the son also had a skin eruption The patient was readmitted after several weeks His Wassermann test was positive, and an ulcer on the palate contained many spirochetes The son's Wassermann reaction was negative, although he admitted that a chancre was present at the time of the last transfusion The patient developed a gumma of the larynx from which he died ten weeks after the transfusion, in spite of treatment

[16] Thayer recently informed us of an instance in which the patient developed tertian paroxysms with the malarial parasites in the blood following transfusion from a supposedly healthy sailor

[17] Landsteiner Centralbl f Bakteriol, 1900, **27**, 361

[18] Shattuck Jour Path and Bacteriol, 1900, **6**, 303

[19] Landsteiner Wien klin Wchnschr, 1901, **14**, 1132

[20] DeCastello and Sturli München med Wchnschr, 1902, **49**, 1090

[21] Jansky Abst, Jahresb ü d Leistung u Fortschr a d Geb d Neurol u Psychiat, 1907, **11**, 1092

[22] Moss Bull Johns Hopkins Hosp, 1910, **21**, 63

[23] Throughout this paper the groups established by Moss will be used Group II and Group III cross agglutinate Group IV cells are agglutinated by no other serums Group I cells are agglutinated by all other serums

[24] Ottenberg, Reuben, and Kaliski, D J Accidents in Transfusions, The Journal A M A, Dec 13, 1913, p 2138

[25] Ottenberg, Kaliski and Friedman Jour Med Research, 1913, **23**, 141

[26] Brem, W V Blood Transfusion, The Journal A M A Ju 15, 1916, p 190

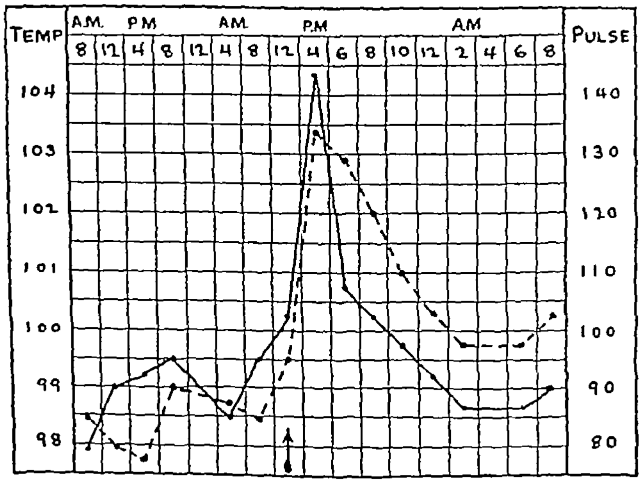
[27] Halban Wien klin Wchnschr, 1900, **13**, 545

[28] Moss and Happ Unpublished data

TECHNIC OF AGGLUTINATION TESTS

Blood is drawn into a Wright tube or small test tube and centrifuged to obtain clear serum Two drops of blood are allowed to drip from the finger or ear into 5 c c of 1.25 per cent sodium citrate in 0 85 per cent salt solution to obtain a suspension of corpuscles A citrate solution is used to prevent clumping of the cells in the cases in which several drops of blood are required to make a satisfactory corpuscular suspension A cover slip is cleaned from 95 per cent alcohol, and by means of capillary pipets (one for each serum and each corpuscle suspension) 1 drop of donor's serum and 1 drop of recipient's corpuscles are placed on it and stirred with a small glass rod This is inverted over a hollow ground slide and sealed with oil The hanging drop should now be examined under the microscope. It is of the utmost importance to have the drop spread out to an even thickness, with the corpuscles just touching one another The process should be repeated donor's corpuscles and recipient's serum being used Controls may be made with salt solution instead of serum, but are not necessary except in doubtful cases It is unnecessary to wash the corpuscles used in performing agglutination tests, as the amount of serum present in the emulsion is too small to cause confusion

The hanging drops should be allowed to incubate at 37 C for one hour before hemolysis or agglutination can be excluded Many reactions would be avoided if this rule were strictly followed Several instances in which agglutination and hemolysis were absent at the end of thirty minutes have shown agglutination at the end of forty-five minutes Previous to the observance of this rule, reactions following several transfusions were explained when the bloods were subsequently tested showing no agglutination in thirty minutes but definite incompatibility at the end of forty-five minutes Agglutination is often present at the end of five to ten minutes, however, occasionally with complete hemolysis at the end of thirty minutes



Temperature and pulse chart in the case of Mrs S who received 450 c.c of citrated blood at point indicated by arrow Headache malaise urticaria and hemoglobinuria followed The bloods were compatible by routine tests The solid line indicates temperature the broken line pulse.

TECHNIC OF TRANSFUSION

Blood may be drawn through a needle directly into a graduated flask containing a known amount of citrate solution, but good results are obtained more constantly by adding a citrate solution gradually to the blood as it is drawn To accomplish this, a graduated bottle of from 500 to 1,000 c.c capacity has been used The mouth of the bottle should accommodate a No 10 or 12 rubber stopper containing three perforations In the middle hole the stem of a small (50 c.c.) graduated separating funnel is fitted The two side holes accommodate right angle glass tubes to one of which is attached a rubber tube in which is interposed a glass 'trap" filled with cotton Through this, suction can be applied if necessary To the other right angle tube the needle is attached by means of a 6 inch length of pure gum rubber tubing The needle should be of 10 to 14 (B & S) gage and preferably platinum iridium or nickeloid" to avoid roughening and consequent clot formation

The bottle with its stopper and tubes should be sterilized by autoclaving or boiling Before use it should be well rinsed with 0 8 per cent. sodium chlorid solution The 2 5 per cent. sodium citrate solution is made up with distilled water and sterilized

Five c.c. of citrate solution are allowed to run into the bottle after the graduated funnel has been filled A tourniquet is placed around the donor's upper arm (not tight enough to compress the brachial artery), the cubital fossa is cleaned surgically, and the needle of the apparatus is inserted into a large vein As a rule the blood runs freely into the bottle, although light suction may be necessary As the blood flows in, the cock of the funnel is opened wide enough to allow citrate solution to drip in at the rate of 10 c.c for each 90 c.c of blood The bottle should meanwhile be gently agitated

The blood is transferred directly to a sterile salvarsan apparatus or infusion bottle, previously rinsed with sterile physiologic sodium chlorid solution, and allowed to run into the recipient's median basilic vein,[29] exactly as one gives salvarsan After 25 c.c. have been introduced, it is better to wait ten minutes to see that no immediate reaction occurs The remainder is allowed to run in at the rate of 500 c c in from twenty to thirty minutes

In a number of instances in which the recipient belonged to Group III (Moss), washed corpuscles from a Group IV donor have been used The technic is relatively simple, and the results have been good The donor's blood is drawn and citrated as in an ordinary transfusion The blood is then transferred to 100 c.c. centrifuge tubes which have been sterilized and rinsed with sterile physiologic sodium chlorid solution After these tubes have been covered with sterile caps, they are centrifuged at 2,500 revolutions for fifteen minutes The plasma is then pipetted off, and 0 8 per cent sodium chlorid added to bring up to the original volume The salt solution suspension of corpuscles is given in the same manner as whole citrated blood The small amount of plasma transferred seems to have no deleterious effect

Blood may be carried some distance before being used, and when necessary may be kept on ice for many hours In general it is better to inject the blood within a few hours after withdrawal

Since the introduction of the citrate method into this hospital thirty-four patients have received a total of 100 transfusions The procedure has been carried out in a variety of conditions, as is shown in the accompanying table No attempt will be made to discuss the general indications for transfusion, since this has received full consideration in the excellent article by Ottenberg and Libman[18]

CONDITIONS IN WHICH TRANSFUSION HAS BEEN PERFORMED

Disease	Number of Patients	Number of Transfusions
Anemias		
Pernicious	11	49
Secondary	8	17
Burns	2	3
Leukemia		
Myeloid with hemorrhages	1	7
Lymphatic (chronic)	1	2
Sepsis (Streptococcus viridans)	2	2
Typhoid fever	7	14
Uremia	2	6
Total	34	100

REACTIONS

In order of frequency, the symptoms following transfusion of blood are malaise, slight elevation of temperature, chilly sensations, actual rigor, urticaria, pruritus, nausea, vomiting, lumbar pain, dyspnea, cyanosis and hemoglobinuria Any single one or combination of these symptoms occurring within three hours after transfusion has been considered a reaction Such symptoms have been present in 17 per cent of the cases here reported Most of the reactions were trivial, none fatal In every case the bloods were compatible by the routine tests

---

[29] In Infants it may be necessary to use the superior longitudinal sinus

The cause of these reactions is not definitely known Typical anaphylactic-like reactions of mild grade are not uncommon, and are quickly relieved by a hypodermic injection of epinephrin. Three followed the transfusion of washed cells One occurred in a patient with typhoid fever, following transfusion from a convalescent typhoid patient Garbat has observed slight chills and some elevation of temperature following the intravenous injections of 2 gm of sodium citrate In none of these cases has more than 1 75 gm of citrate been used This quantity would hardly account for the symptoms The reactions seem to bear no relation to the volume of the transfusion, many having followed small ones

In this connection, two cases of pernicious anemia are of some interest

Case 1 —Mrs J B received 9,000 c c. of blood by the Lindeman method between Dec 10, 1915, and Feb 14, 1916, without any severe reactions During this admission her spleen was removed She was readmitted in August, 1916, with extreme anemia Citrate transfusions from her husband and her brother (both had been donor several times previously) were followed by severe, almost fatal reactions with hemoglobinuria A Lindeman transfusion, performed with a new donor, was followed by chill, high fever, coma and death There was marked hemoglobinemia and hemoglobinuria

Case 2 —The case of H A P is similar in many respects Splenectomy and repeated transfusion had been performed during previous admissions Following a citrate transfusion from a previous donor he had a severe reaction, chill, stupor and hemoglobinuria A new donor was secured but a similar reaction followed No more transfusions were attempted

These two cases have suggested the possibility of the formation after repeated transfusion of antibodies to homologous blood which are not demonstrable in vitro In both, after the occurrence of severe reactions, tests were done with particular care Gross and microscopic preparations were made with varying dilutions of donor's and recipient's serums These were incubated one hour at 37 C, then put on ice for twenty-four hours, and again incubated There was no agglutination or hemolysis Similar tests were done in the choosing of subsequent donors with negative results, yet transfusion from these donors gave most severe reactions Without attempting to explain these, it would seem that transfusion is a self-limited method of treatment in pernicious anemia since, after a certain number of transfusions, homologous blood may cause reactions of increasing severity We have been unable to produce any similar result experimentally in normal animals

CONCLUSIONS

1 The citrate method is an almost ideal means of transfusion

2 Careful preliminary tests for compatibility are essential to success

3 Washed cells from a donor of Group IV may be given with impunity to a recipient of any other group, and this procedure is preferable to giving whole Group IV blood

4 Repeated transfusions in pernicious anemia are not without danger

---

BILATERAL PNEUMOCOCCAL PAROTITIS

WITH REPORT OF A CASE

JOHN V BARROW, SB, MD
Attending Physician, Los Angeles County Hospital
LOS ANGELES

Pneumococcal parotitis, either as a complication of pneumonia or as a focal pneumococcal involvement, is rare Whether associated with pneumonia or occurring as a primary condition, it is always a serious expression of a grave condition

In "Modern Medicine,"[1] Osler and McCrae report twenty cases found in the literature, but the date of the compilation could not be obtained In 1889, Testi[2] obtained the *Diplococcus pneumoniae* of Fränkel in pure culture from the pus in a case of parotitis complicating "acute croupous pneumonia"

Sir John Moore[3] emphasizes its rarity in reporting it to have occurred only six times in nearly 6,000 cases of pneumonia in the Vienna hospitals He adds further weight by assuring us that von Jurgensen never saw this complication in all his experience

In 1910, Zesas[4] collected from the literature reports of twenty-seven cases of parotitis as a complication of pneumonia His own case made the twenty-eighth Here he probably included the three cases reported by Bargellini[5] in 1908

In 1915, J Porter Parkinson,[6] from the Queen's Hospital for Children, reported a case in which the complication supervened suddenly on a resolving lobar pneumonia in a child The temperature rose suddenly from 99 5 to 104 F without any fresh chest signs On the following day the right parotid gland was hard, red and swollen It was incised two days later, and the pus showed the presence of both pneumococci and staphylococci Blair[7] of St Louis, in reporting his work on septic parotitis recently, included one case due to pneumococcus

REPORT OF CASE

I now report an additional case with its slight variation from those reported

Early in November, 1916, Mrs L F, aged 67, in a fairly debilitated condition, developed what appeared to be a deep seated bronchitis There was slight hypostatic crepitation in the dependent lung tissue, and bronchial breathing was manifested posteriorly at the lower angle of the left scapula There was no elevation of temperature above normal A slight cough with tenacious but not bloody sputum was present Considerable flatulence with loss of appetite was complained of The patient felt there would be a lighting up of a chronic quiescent cystitis

The blood pressure was 105-70, which has only 5 or 10 mm below her usual pressure The heart tones were distant, but the rhythm was good The second pulmonic tone was not pathologically accentuated After about ten days of the usual management, the lung condition began to improve, and at the same time the patient was disturbed by slight chills followed by hot flushes, and sharp shooting pains in and around the heart Abruptly on the afternoon of November 15 there was a chill followed by extreme collapse, a subnormal temperature, and a loss of the wrist pulse The heart was irregular, missed every third or fourth beat, and became so weak in action that five hours of strenuous stimulation were required before anything like security prevailed For several days the heart labored under the influence of a marked toxemia There was every sign of sympathetic paresis as expressed by nausea, flatulence, dizziness, cold perspiration and varying degrees of fever The patient had been complaining of pain in the left parotid region November 17, this gland was markedly swollen, tender and painful The opening of the duct was pouting and reddened By careful manipulation a quantity of greenish-yellow mucopus was expressed Three days later the right gland became involved in the same manner as the left From 3 to 10 c.c. of a greenish-yellow pus was expressed from these glands two or three times daily for a period of about two weeks November 21, the pus was examined by Dr C A. Johnson, pathologist, who found pneumococci in pure culture Blood examination revealed hemoglobin, 73 per cent (Dare), red blood cells, 4 000,000, white blood cells, 12 800 The differential count gave polymorphonuclear neutrophils, 77, small mononuclears, 17, large mononuclears, 4, eosinophils, 1, indentate nucleus, 1 The urine and stool analyses were comparatively negative For several days the patient lay in a markedly toxic condition with rather free drainage of pus from both glands Several circumstances forbade operative interference During the night of November 21, five or six days after the acute onset of the glandular involvement the temperature dropped to normal and below Perspiration was profuse, and stimulation was needed to prevent collapse Thereafter the toxic symptoms subsided and reappeared only at intervals as the plugs of mucopus temporarily obstructed the ducts on either side.

---

[1] Osler and McCrae Modern Medicine, **1**, *263*

[2] Testi Encyclopedia Medica, **9**, Edinburgh, William Green

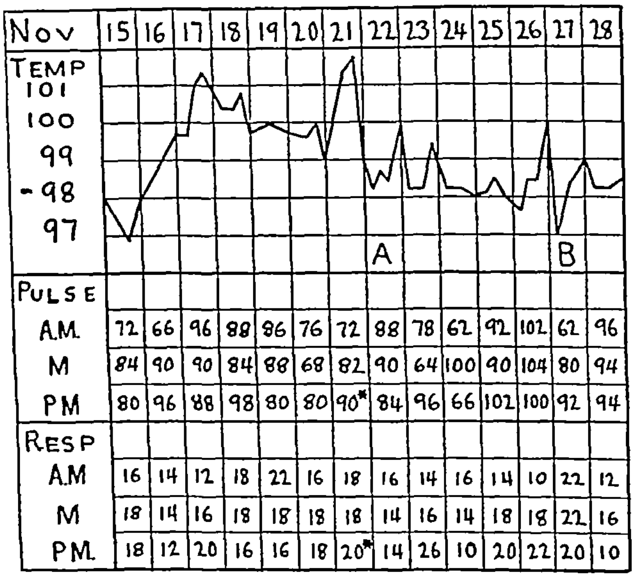
[3] Moore, John Dublin Jour Med Sc, 1909, **128**, *100*

[4] Zesas, D G Parotitis with Pneumonia, Fortschr d Med 1910 **27**, No 34, abstr, The Journal A M A, Jan 22, 1910, p 327

[5] Bargellini, E Parotitis from Pneumococcus Infection, Policlinico Rome, 1908, Practical Section No 22, abstr, The Journal A M A July 11, 1908, p 178

[6] Parkinson, J P Brit Jour Child Dis, 1915, **12**, No 137

[7] Blair Septic Parotitis, Med and Surg, 1917, **1**, No 1



Nov	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Pulse														
A.M.	72	66	96	88	86	76	72	88	78	62	92	102	62	96
M	84	90	90	84	88	68	82	90	64	100	90	104	80	94
PM	80	96	88	98	80	80	90*	84	96	66	102	100	92	94
Resp														
A.M	16	14	12	18	22	16	18	16	14	16	14	10	22	12
M	18	14	16	18	18	18	18	14	16	14	18	18	22	16
P.M.	18	12	20	16	16	18	20*	14	26	10	20	22	20	10

Temperature, pulse and respiration chart *A* crisis began *B* ducts plugged * 11 p m pulse 88 respiration 18

Convalescence has been slow After nearly two months the pus has given place to a copious outpouring of a clear, rather thin and salty secretion There has never been any evidence of glandular concretions though repeated search has been made for them This patient has had mumps along with the usual diseases of childhood.

COMMENT

The cases reported to date emphasize the following points The majority occur in the aged and debilitated The earlier the complication arises in the course of a pneumonia, the more serious is its import The lung involvement is not aggravated by the appearance of the parotitis, but the symptoms from the pneumococcemia are markedly increased In a few cases in which the complication has occurred late, lung resolution has seemingly been hastened

The disease is usually unilateral Of the thirty reported cases to date, only eight were bilateral Resolution of the glands has been slow As a rule, the pathologic process goes on to suppuration Drainage has been accomplished through the ducts naturally, or has been produced through incision Spontaneous resolution has occurred in some cases The present case is unique in its termination by crisis It may well be classed with other reported focal pneumococcal infections in which crisis has terminated a pneumococcemia in which there has been no lung involvement

515 Investment Building

A WATER-BORNE EPIDEMIC OF TYPHOID FEVER

ISOLATION OF THE TYPHOID BACILLUS FROM THE CONTAMINATED SUPPLY

J C GEIGER, MD, GRACE A. MACMILLAN
Assistant Director and Bacteriologist Respectively, Bureau of Communicable Diseases
AND
C G GILLESPIE, CE
Director of the Bureau of Sanitary Engineering California State Board of Health
BERKELEY, CALIF

A water-borne epidemic of typhoid fever numbering fifty-two cases with no fatalities recently occurred in a camp at the San Pablo Dam, Contra Costa County, Calif The interesting factors noted were

1 A perfectly equipped laboring camp with one decidedly glaring error from an engineering and hygienic standpoint, namely, a dual water supply, neither of the sources of which had been examined bacteriologically

2 A short incubation period in four cases

3 The history of water not being drunk, coupled with the interesting information obtained of brushing the teeth, cleansing the mouth and washing the hands

4 The large number of ambulatory cases, nineteen, in view of the number of known cases, fifty-two

5 The isolation of the typhoid bacillus from the feces of two patients, the serum of one having continuously yielded a suggestive Widal and the other a negative

6 The isolation, from the diluted sewage drunk, of an organism completely identified as the typhoid bacillus

EPIDEMIOLOGY

Ground was broken for the dam, Sept 11, 1916, and a temporary camp established The permanent camp, situated half a mile below the dam, in which the typhoid occurred, was opened Oct 19, 1916 Sanitary conveniences, such as water-flushed toilets, shower baths and washstands were provided, each bunk-house having its own unit

There is a definite history of the occurrence in the upper temporary camp of a few cases of dysentery, the exact number not being known, all of a mild type and of an extremely short duration There was a continuance of these cases when the permanent camp was opened None of the patients were ill enough to quit work, and their condition did not seem to be of enough consequence to be brought to the attention of the camp physician, therefore no records of these cases are available

When the investigation was begun there were fifteen patients ill in the Providence Hospital, Oakland, from the permanent camp, the initial and most noticeable symptom being diarrhea, but evidently a dysentery of a more extreme type than those mentioned above Three more patients were sent from the camp to the hospital the first day of our visit, December 7 By December 11, through blood cultures, feces and Widal examinations, as well as by clinical observations, these cases were diagnosed as typhoid fever

Several matters of interest relative to the epidemiology were ascertained at the time of our first visit, especially with reference to the culinary force The chief cook informed us that none of his force, which had been continuously employed for about a month previous to our investigation, had been ill in any way whatever, even after an epidemic was evident He also informed us, and later investigation proved this to be a fact, that the kitchen and dining room were entirely supplied with water from the upper canyon spring The kitchen force drank this water and used it even for ordinary cleansing purposes, hot water being always available

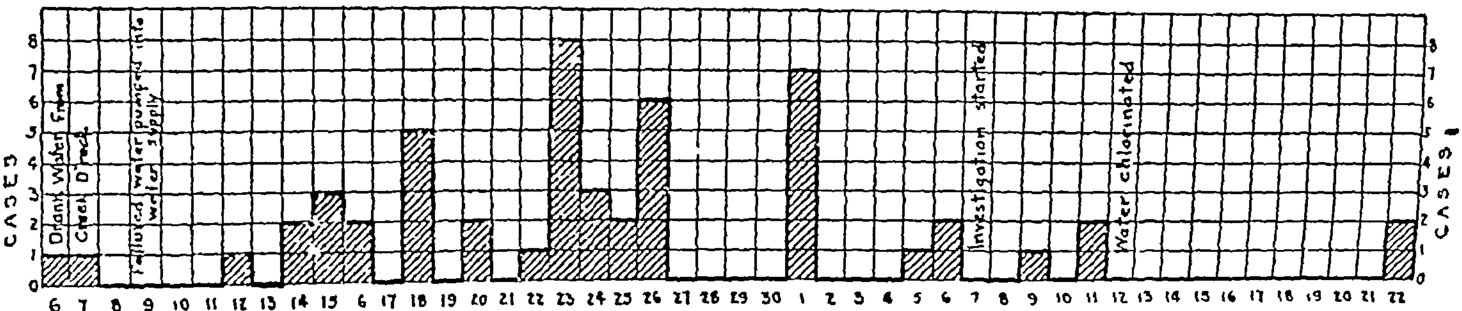


Fig 1—Date of onset

Basing the data on the complete number of the cases in the epidemic, fifty-two, we find that of these patients, four drank water from San Pablo creek direct Eleven patients used the water from washroom faucets only for brushing their teeth, cleansing their hands, etc The remaining, thirty-seven, in all, of seven of whom we have no positive records, drank the water at the wash rooms Eight of the men ill did not eat or live at the camp This practically eliminated the cookhouse from suspicion Nineteen could be considered ambulatory cases, the average time each patient was working while ill being eighteen days

The number of men employed averaged 340 per day As there were no toilet facilities provided for these men while at work, the reprehensible habit of defecating around the Creek banks and all over the watershed was general This was particularly true of the ambulatory patients, therefore making them an essential factor by materially and continuously adding to the already polluted water what could be considered specific typhoid excreta

The scope of our investigation was again extended to the camp, and the connection between the creek water and the wash rooms and offices definitely proved The pipes which carried the creek water extended entirely over the camp but were cut off completely from the kitchen The cut-off here was made, November 9, the day the creek water was pumped in This water, dirty in color and polluted as it evidently was and so proved, with an odor decidedly offensive and supposedly for stock only, was drunk or used in some manner by all the men ill with typhoid fever

December 12, the superintendent was instructed to begin chlorinating the creek supply This was only a temporary expedient, pending the development of additional springs about 1 mile distant These springs would furnish a complete supply of safe water for all purposes The means adopted for chlorination consisted of stirring daily a 1-pound can of chlorinated lime in the lower 10,000 gallon tank used for the storing of the creek water This dose completely disinfected the water, even imparting a taste which would make it impossible for the men to take it into their mouths That this disinfectant was efficient is shown in the results of the bacteriologic examination and by the onset chart (Fig 1), only two persons coming down afterward, both at a time not inconsistent with the incubation period of typhoid fever, if one would consider the distinct positive history of their drinking the polluted water before chlorination This completed the many links in the chain of positive evidence of the water being the causative factor

It is of interest to note the rainfall, November 25 and 26, amounting to 0 66 inch The relation of this rainfall to the sudden rise in the onset of cases, December 1, as shown by the onset chart, is worthy of the consideration of being extremely suggestive

WATER SUPPLY

This was from several sources Up to November 9, the water that was used in the camp was piped directly from a spring, situated about 1½ miles up an isolated canyon to the east of the camp, and hauled from two others, one above a ranch near the dam, and one about a mile further up stream Both latter supplies were brought in water wagons to the men working on the dam and whenever necessary to the camp proper All water wagons were provided with a spigot and common drinking cup Field investigations and bacteriologic examination proved that these springs were safe from human pollution The other supply was the San Pablo Creek Water in the creek was not noticed in any appreciable quantities until October 15 Following considerable rains, November 4, and owing to shortage of the spring supply, connection was made by pump, November 9, with water in the creek, and this water pumped directly into some of the mains and into a wooden cistern situated on elevated ground for storage purposes This water from San Pablo Creek was supposedly used only by stock

Referring to Figure 3, which shows the arrangement of water pipes, it is noted that the dining rooms were supplied exclusively by spring water from the east spring The fire hydrants were supplied directly from the "lower tank," filled from overflow from the "upper tank" or spring water and water pumped from San Pablo Creek All the bunkhouse sheds were supplied from the same source When the creek supply was turned into the system, the valve marked "A" was closed, thereby eliminating this supply from the dining room and kitchen

BACTERIOLOGIC ANALYSIS OF WATER

Source	Gel. Count	Agar Count	B Coli Index	Turbidity	Alkalinity	Chlorin	Hardness
Spring Supplies							
1 Spring east of camp 12/6/16	6 000	700	5	25	225	65	
2 Spring up canyon, 12/6/16	3 000	125	0 in 10 c c	5	215	42	
3 Tap in dining room 12/7/16	2 000	150	0 in 10 c.c.	10	245	63	
4 Spring 12/7/16	800	20	0 in 10 c.c	0	245	40	
5 Water wagon at camp 12/7/16	1 200	80	0 in 10 c.c.	0	225	36	
San Pablo Creek Samples							
6 Opposite camp 12/12/16	25 000	4 000	10	0			
7 Opposite camp 12/16/16	9 000	2 000	1	20	250	70	310
8 Opposite camp (chlorinated) 12/16/16	75	70	0 in 10 c.c.	40	250	76	310
9 Above tunnel 12/16/16	15 000	2,500	100	250	250	76	310
10 Below dam 12/16/16	5 000	150	1	3	245	70	310

RESULTS OF ANALYSES

Springs —Samples 1 and 3 are from the east spring supply This is the spring that supplies the dining room and kitchen This spring is a box situated in the bottom of a small stream, a tributary of San Pablo Creek, and undoubtedly subject to a variable amount of pollution by cattle whenever the creek has a flood Numerous cattle graze on the hills near and around the spring, but there appears to be no possible chance of human contamination of this water Sample 4 is from the spring which was the original supply of the temporary camp This water was transported in wagons to the workmen on the dam

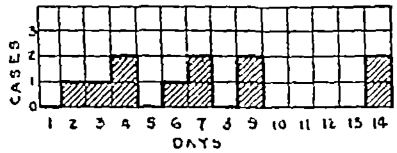


Fig 2 —Known incubation period of eleven cases

San Pablo Creek —Samples 6, 7 and 8 are interesting to contrast Samples 6 and 7 taken from the identical neighborhood and but four days apart show a marked variability of pollution, not easily explained It must be remembered that Sample 6 was not tested in smaller dilutions than $1/10$ of a c c, and from the gas production in the fermentation tubes undoubtedly pollution could have been demonstrated in much smaller amounts This was the sample from which typhoid bacilli were isolated, the method of identification of the organism being described in full later

The result of the analysis of Sample 9 is indicative of the effect of the brush gangs on the creek A comparison of this with Sample 10 again affords one an interesting contrast Between the two points of the watershed from which these samples were taken there are several pools in succession In addition, the creek water passes through deposits of rock thrown across the stream Naturally, there must be some sedimentation and clarification with a corresponding decrease in pollution Whether or not this explanation applies to the differences demonstrated between Samples 6 and 7 can only be surmised It is not unreasonable to assume that the improvement in the latter **was** due to the cessation of the careless committing of nuisances on the watershed through the community publicity of our investigation and the resulting educational propaganda On the other hand, this variability offers an explanation to the onset of the cases, as a large number may receive their infection on the days of greatest contamination

Isolation of Typhoid Bacilli from Sample 6 —Following the completion of the epidemiologic data with their important history of the great pollution of the creek water drunk and the active presence of a large number of ambulatory cases with their excreta reaching the creek direct, an attempt was made to isolate typhoid bacilli from the creek water Though for esthetic reasons called water, it would better have been designated a dilute sewage, with a high turbidity and a decidedly offensive odor

Direct plating in 1 c c amounts was made on litmus lactose agar Following an incubation of the plates at 37 C for forty-eight hours, many suspicious colonies were transplanted on Russell's double sugar mediums, three of which gave typical reactions of typhoid These morphologically, culturally and serologically proved to be the typhoid bacillus The first generation of the isolated organism agglutinated known typhoid polyvalent serum as high as 1 160 Its agglutinating power on the fourth generation was increased to 1 1,280, macroscopically

CLINICAL AND LABORATORY DATA

The average percentage of the men employed who obtained the contaminated water supply and developed typhoid was probably 20

In two of the patients, the date of onset is given before the polluted water was pumped in Both of these gave a history of obtaining water from the creek direct, one in particular having preferred this water to any other The date of onset of the first case was November 6 and the last, December 22

The largest number reported in any one day occurred November 23, two weeks after the infected water reached the faucets in the wash rooms The first symptoms noted were diarrhea and extreme headache In 98 per cent of the cases in this epidemic, diarrhea was the most pronounced symptom As a primary symptom this is far in excess to what is usually reported If one should consider its active presence as an indication of extensive intestinal lesions with all their accumulated dangers, then the absence of any fatalities is the more remarkable It has not been infrequently noted that the drinking of polluted water would cause diarrhea, but usually such cases, as demonstrated in this epidemic, are only forerunner tidings of a major disease

An effort was made to obtain, whenever possible, accurate information as to when the infection was received In only eleven cases were we able to ascertain to any degree of certainty the probable incubation periods These are given by chart It is particularly interesting to note the short incubation periods in four of the cases in this epidemic One patient, an alcoholic, began work on the dam just after a debauch of some days' duration This man, in cam two
days, had an overwhelming thirst, and ymp-
toms of typhoid were noticed on the thi f his
stay From this one case alone, one coul rgue
that the incubation period of typhoid able

to an unknown degree, possibly depending on the dose of the infection received and the resistance of the patient.

There occurred twelve relapses in the cases under observation, thus giving a percentage of 20.7 when based on the total number of cases. This percentage is rather high, and is probably due to the large number of ambulatory cases and dependent on them. There has been only one patient reported as having more than one relapse. Two patients gave a history of previous typhoid, but none gave a history of previous vaccination against typhoid. The age distribution was over a rather large adult area, the youngest being 19 and the oldest 56. All the patients were male.

In one case pericarditis as a cardiac complication was noted. This is a rare complication of typhoid, particularly in the aged, and was most serious in this instance because of its association with an active bronchopneumonia. Hemorrhage from the bowels occurred in three of the cases in this series. In three, bronchopneumonia complicated the disease. In one case abdominal pain and tenderness was severe. A rather unusual complication was incontinence of urine and feces, which was noted in four cases. Neuritis was general, the usual site being the face and legs. Pain was particularly noticed in many of the cases over and in the neighborhood of the spleen. Of curious interest was one case of "tender toes" as first described by Hanford. This patient complained bitterly of the extreme pain. Convalescence in most of the cases was followed by marked and extended weakness and extreme nervousness.

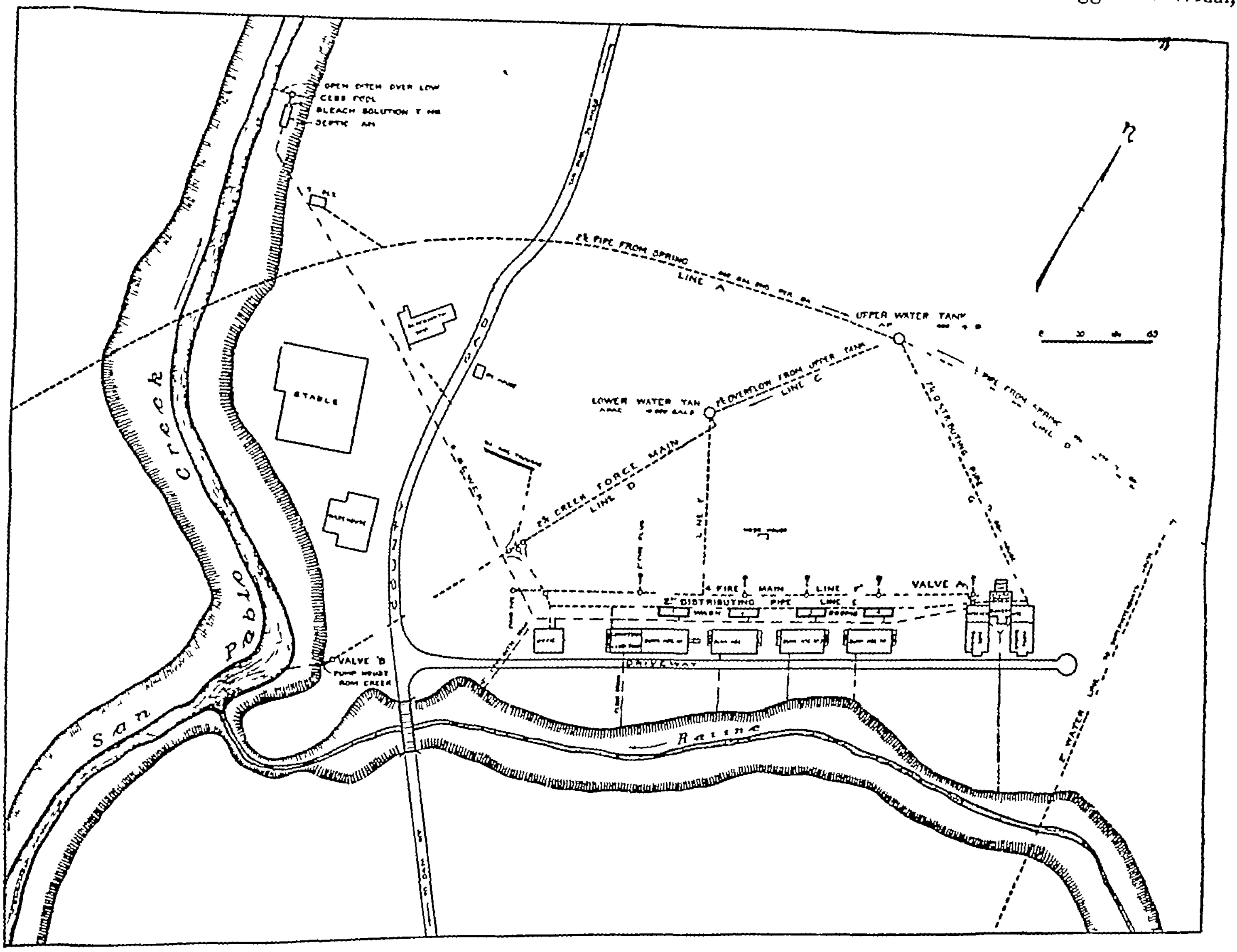


Fig. 3.—Arrangement of water pipes.

There are histories of only two possible contact cases, but as both received the infected water it is more likely to consider this as the direct cause. If one considers the large number of ambulatory patients the immediate cause of many of the cases, then the majority of persons ill with typhoid fever in this epidemic are contact cases, practically in the true sense of the word.

Widal tests were made in forty-five of the cases, both microscopically and macroscopically; thirty-three of these were positive. Of the remaining, twelve in all, six were suggestive and six were negative. It is of extraordinary interest to note that from one of the patients from whom we obtained a suggestive Widal, we were able to isolate typhoid bacilli from the feces. Again, from the feces of a patient from whom we obtained a negative Widal we were able to isolate typhoid bacilli.

Out of four specimens of urine which were examined, typhoid bacilli were isolated from two. This would suggest that the typhoid bacillus is given off more frequently in the urine than is popularly supposed. Out of twenty-nine specimens of feces examined, eight gave positive results. This would seem to add emphasis to the importance of examining specimens of urine along with those of feces. Blood cultures were obtained from twenty-six patients, ten of which were positive.

From a comparative study of the number of positive blood cultures obtained and the number of positive Widal tests, one cannot help but appreciate the diagnostic value of the Widal test, even though, as shown in this epidemic, we may obtain reactions not consistent with the clinical findings

[Addendum —Two claims of persons who contracted typhoid fever in this epidemic were brought before the Industrial Accident Commission of California Following is a copy of the decision and a later memorandum on these cases]

BEFORE THE INDUSTRIAL ACCIDENT COMMISSION OF THE STATE OF CALIFORNIA CLAIM NO 2482

Clara B Collins Applicant vs Oakdale Irrigation District and State Compensation Insurance Fund Defendants

Contentions made in applicant s petition for rehearing appear to indicate that applicant s counsel could not have understood the reason for the Commission s decision to deny a death benefit. The facts in this case are briefly that A. F Collins the husband of the applicant, was employed by the Oakdale Irrigation District to operate a stationary engine which lifted sand from the Stanislaus River to the banks of the river From October 18 to November 1 the construction camp where he was employed was located at Two Mile Bar On November 18 he sustained a slight accident which would probably not by itself, have disabled him from working for more than the two weeks waiting period described by the Compensation Act On November 20 he left his work suffering from typhoid fever and died from typhoid on Dec 5 1915

The question upon which the case turned was whether or not the death from typhoid could be attributed to the employment Applicant s counsel attempted to show that the typhoid was caused by drinking impure water there being no pure water available at the construction camp It is our opinion that the applicant has not sufficiently established the fact that the typhoid was contracted from this cause The fact that no other workman in construction camp, had contracted typhoid within the last five years, taken in connection with the further fact that no analysis was made of the water and no evidence was produced to show that the water contained any typhoid germs is sufficient in our opinion, to destroy any connecting link between the conditions attending the place of employment and the typhoid While the applicant s contention is possibly true this Commission cannot require employers to pay death benefits upon mere conjecture or surmise however reasonable where such conjecture does not amount to satisfactory proof

Typhoid can be contracted in other ways than by drinking impure water Contaminated food such as milk oysters or green vegetables may be responsible Flies carry the disease to human beings The average period of incubation is from eight to fourteen days This strengthens our contention that there was no connection between the slight accident sustained by Mr Collins and the development of typhoid

The decision in this case should not be taken as holding that typhoid fever contracted by drinking polluted water furnished at the place of employment may not be an injury or occupational disease and compensable under the Workmen s Compensation Insurance and Safety Act. The decision upon this point is reserved until some case arises in which the connection between the employment and the typhoid is more clearly established

Industrial Accident Commission of the State of California
A J Pillsbury,
Will J French,
Meyer Lissner.

H L. White.

MEMORANDUM

These cases of typhoid fever In the case of *Collins vs Oakdale Irrigation District No 2482* the question whether typhoid fever can be an industrial injury was left open the evidence not being sufficient o connect the disease with the employment. In the cases now before us the evidence is sufficient and there could be very few cases where the origin of the disease could be proved more strongly than it is here. In a camp of some 300 men a large number (44 according to Mr Ayer 53 according to Dr Geiger) were taken with the disease This of itself would be almost enough to prove that the disease (in at least most of the cases) arose from the water or the food in the camp But, in addition typhoid germs were found in a test made a few days after the disease broke out in the water of San Pablo Creek at the point where the water was taken out of the creek and pumped into a tank, from which it was supplied to the bunk houses for use in the wash rooms of the men There was also water conducted from a spring to another tank and from there piped to the kitchen The evidence shows that this water was not polluted and the origin of the disease is sufficiently located in the water from the creek.

It was not intended that this creek water should be drunk, the spring water being intended for drinking but no caution seems to have been given not to drink the creek water besides without doubt the disease can be caused from washing in polluted water cleaning the teeth with it etc.

Accepting the fact as established that the typhoid fever arose from the water supplied to the men, the question is whether that disease is compensable. I believe that it is having arisen from the water that the men had to use I see no difference between it and a disease that arose from poisonous gases, smokes, etc , that men breathe during their work or poisonous liquids or other substances that they handle In this particular instance it was an occupational disease.

The only case that I have found in the books involving typhoid fever is *Vennes vs New Delle Lumber Company* (a Wisconsin case) referred to on page 229 of Class on "Workmen's Compensation Law," and given in full on page 273 where the supreme court held that disease to be within the compensation act And this was a decision against the position taken by the representative of the deceased employee, who was attempting to sue in the courts for damages for negligence, the supreme court holding that it was a compensation case and that the court had no jurisdiction

Following that case applicants are entitled to awards, and they are prepared accordingly
Referee.

DIABETES MELLITUS

BROADER ASPECTS OF TREATMENT AND RESULTS *

H P GREELEY, M D
WAUKESHA, WIS

The dietetic or fasting treatment of diabetes has been so universally successful in quickly ridding patients of their sugar and acidosis that I have come to regard as more important ultimately the subsequent education of the patient in the ways and means of keeping sugar free Success here largely depends on the educability and the personal equation of the patient and on the ability and enthusiasm of the physician It should be judged largely by its successes and not by its unavoidable failures

METHODS OF TREATMENT

Among the different methods of treatment, by far the most important, in view of the number of patients it reaches, is the treatment in office and home by the general practitioner This method furnishes a closer and more individualized means of treatment than any of the others, and when it is combined with the services of an expert nurse-dietitian, is perhaps the best in that class of patients on whose general health and strength little inroad has been made, and when it is not considered advisable or possible to interrupt the activities of the patient We see the failures Patients have often been subjected to long periods of fasting (I use the term "fasting" advisedly, for I heartily agree with Hodgson that "the starvation treatment," as it has come to be known, is not only an odious but also an incorrect phrasing of a therapeutic fast) The fasting generally clears the patient of sugar, but because of the poor control exercised in the careful graduation of the diet, sugar returns almost at once, and both patient and physician become disgusted, and the weakened but little benefited unfortunate is nursed along until he is moribund, or sent at once to a specialist The mushroom growth of the fasting method and its ready adoption by physicians and surgeons has done untold harm For instance, a prominent surgeon has recently sent us a patient, treated by fasting plus whisky and large quantities of olive oil Needless to say, this patient was on the verge of coma

The class method of treatment is admirably adapted to the outdoor departments of general hospitals, in which difficult cases can be first treated indoors, and by cooperation of social service workers successfully transferred to the outdoor departments Of course this is not applicable to private patients in general hospitals, and the same disadvantage of too little laboratory experience in the preparation and serving of food holds as in the former method The general hospitals of today furnish the best means of treating and study-should also be advised against unless there is no probability of offspring. Childbearing and marriage are compatible with "health" and safety in diabetes, but cannot be condoned by eugenists.

---

* Read before San Francisco County Medical Society April 10 1917

In our series of 501 cases, it took an average of 2.84 days to free the patient of sugar. To those who treated the disease before fasting methods were generally employed, this is certainly an improvement. Each patient is treated individually and not subjected to an inviolable routine. Practically every patient receives a preliminary diet consisting largely of protein and carbohydrate, both in small quantities, and largely made up of vegetables with small portions of bread and skim milk. Fasting is then instituted if necessary. Most mild cases clear up quickly without it.

More favorable results are obtained when the disease is of less than a year's standing. Here it took 2.57 days to eliminate sugar. In those who had had the disease over a year, the time was 3.11 days. Children under 12 years of age cleared up in an average of 2.1 days, as compared with 2.7 days in older persons. Previous treatment is generally a handicap to speedy elimination. Many are brought to the verge of coma by their exclusive fat-protein diets given in unlimited quantities. It took 3.5 days to clear these patients, compared with 1.9 days in those who had had no previous treatment. Acidosis was practically limited to the treated patients.

The duration of hospital care has a direct bearing on the success of treatment. The average length of stay was three and a half weeks. The average period of time that patients remained free of sugar after a stay of less than two weeks was four and a half months among the 30 per cent. who reported. When the stay was between three and five weeks, 63 per cent. of the 75 per cent. who reported were still free at the time of their last report, which makes a period of between six and twenty-four months. Patients received in the last six months are not included. Only 12 per cent. of those reporting who were conscientious and cooperative in this group had any but a transitory return of sugar.

The necessity for a more or less prolonged period of care and observation, as seen in these statistics, is in sharp contrast to the dictum of a well known professor of medicine who, after six months of experience with the Allen treatment, allows two days to get the patient sugar free, two days to establish the power of carbohydrate utilization, and two days for education, remarking that "after six days of hospital care such patients are ready to go out." What success would a recent graduate have, who left the school or hospital with this idea of the treatment of diabetes? The present lack of the human touch in medicine is appalling.[1] Teachers with broad human sympathies do more for the practice of medicine by their radiating personalities than a thousand near-scientists and medical dilettantes, whose idea of medicine is a sporting proposition, a hunt for signs and symptoms; if successful they bag their quarry (the diagnosis) and return pleased and satisfied. If their quarry is a *rara avis* they become metaphorical taxidermists and rush it into print.

CLASSIFICATION OF DIABETICS ACCORDING TO INTELLIGENCE

It takes at least three to five weeks and not six days to reform an adult and change his habits of a life time, and educate him in the proper care and readjustment of his life. Even this length of time furnishes inadequate experience for those who belong to Classes 3 and 4 as I have divided them. Class 1 comprises persons of some intellectuality; Class 2, the intelligent, faithful and methodical; Class 3 those of poor grade school education without further ambitions in education, and Class 4 the utterly uneducated and inapt.

In Class 1 there are 145 patients; thirty-eight never reported after leaving; 78 per cent. of those reporting were well at last report in periods varying from two years to six months. The average length of time that these patients have been free from sugar is ten months. There have been eleven deaths in this group. The low percentage which reported does not seem consistent with the intelligence of this group, but this is due in great part to their feeling of independence. At least that is the reason given by those who have written or returned for treatment in the past.

In Class 2 there are eighty-seven patients. All but six reported with a considerable degree of regularity. Of the 93 per cent. of those who have reported, the average period of remaining sugar free figures out to be eight months. A large percentage were still well at their last report. This survey can, of course, give only intermediary results. End-results after two years' observation are impossible. There were six deaths.

In Class 3 there are a total of sixty-four patients. Seventy per cent. of the total reported with some regularity. The average time of remaining free from sugar was three and a half months. There are three known deaths in this group.

In Class 4 there are forty-two patients. Seventy per cent. reported, but only for short periods. The average period of remaining free from sugar is one and a half months. Three deaths have been reported.

These figures speak for themselves. It is not from want of consultation and labor that Class 3 and Class 4 patients do not remain free. They are labored with often more than the intelligent ones, for obvious reasons.

DIABETES IN CHILDREN

The subject of diabetes in children is of ever increasing interest, for it is here that physicians are watching with greatest interest the test of the newer methods. The question of ultimate recovery is still an open one. The chief concern is not whether we can keep children free from sugar but whether we can keep them free from infections. The permanent value of being able to bring up children in isolated cases by having them live unnatural lives in institutions is questionable. Such a child is merely a curiosity, without real virility. He is unnatural and unfit for existence, and will be till we have children's hospitals for diabetics only, with schools and every kind of accessory combined. Then we can perhaps bring up a child instead of a "case of diabetes."

I believe[1] that most children with diabetes are born with a permanently weakened pancreatic function, and that though this function is capable of a certain amount of regeneration, the time will almost certainly come in that child's life when the pancreatic capacity is insufficient. This seldom actually occurs, as infections take the life of the child prematurely. Children always respond so well that we become enthusiastic and are constantly expecting to discover a cured case, only to have our hopes dashed to the ground by an acute infection We have one boy, aged 3½ years, still under observation, who has never had a return of sugar since he left, eleven and a half months ago

---

[1] Greeley, H. P.: Speculations Regarding the Pancreas and Metabolism in Diabetes, Boston Med. and Surg. Jour., 1916, 175, 753.

In our series, nine deaths occurred at the hospital and thirty-one after the patients had left, a total of forty Of the nine hospital deaths (2 per cent of the admissions), death was unavoidable in all but two The causes were

Deep phlegmon of the neck and mediastinum
Miliary tuberculosis in a child, aged 9 years
Gangrene of both extremities with infection
Advanced pulmonary tuberculosis
Pregnancy, coma, a dead fetus
Acute melancholia following wife's suicide, patient died sugar free on liberal diet, no necropsy was held
Coma in elderly woman with 45 per cent loss of weight
Melancholia, nervous prostration, loss of 70 pounds, coma
Total loss of pancreatic function, in man, aged 35, he was repeatedly sugar free on fasting, but did not remain so on the slightest feeding, he died with acidosis but no coma, no necropsy was held

Of the thirty-one deaths outside

Six patients were children who died in coma but who were free from sugar till within from three to six days of death
Four had cancer
Six had chronic tuberculosis
Three had pneumonia
Three had gangrene.
One had acute intestinal obstruction.
One had myocarditis (free from sugar)
One had sunstroke (free from sugar)
One had appendicitis
One had carbuncle.
The cause of death in four is not known.

In 60 per cent of these deaths the complications were more deadly than the diabetes

CONCLUSION

We may say that the revolutionary advance in the treatment of diabetes has consisted mainly in the establishment of a new era in which hope replaces despair, healthy activity replaces enforced idleness, well being replaces invalidism and self-reliance and knowledge replace dependence and ignorance

It is now possible by systematic education to give a diabetic person sufficient knowledge to enable him to live in a state of comparative health and activity closely bordering on the normal His greatest asset and his greatest handicap is his own mental accouterment As we are accustomed to say that a man is as old as his arteries, so we might say that a diabetic is as well as he is well informed

---

Educational Methods and Dependency—The community that would neglect completely its water supply, but would equip modern hospitals for the care of its typhoid patients, would show little judgment, but the community that would devote most of its philanthropic interest to the management of the endproducts of dependency—the jails, reformatories, almshouses foundling asylums—while neglecting the efficiency of its school systems, would be no more intelligent—C Macfie Campbell M D *Mental Hygiene* April 1917

WOUNDS OF THE BUTTOCKS IN WAR

GEORGE G DAVIS, M D
Fellow of the American College of Surgeons, Honorary Lieutenant Colonel, Royal Army Medical Corps, with the British Expeditionary Force in France
CHICAGO

The question of buttock wounds in modern warfare is a subject that is deserving of special attention on account of their frequency, the high mortality, the variety of injuries and complications, and the demand for special and urgent surgical procedures to meet conditions rarely encountered in civil surgery

These wounds may be inflicted by rifle fire, machine gun bullets, hand grenades, trench mortars, shrapnel, etc, but by far the most frequent etiologic factor is the high explosive shell particles from bombs Why, one may ask, are buttock wounds frequent? The answer is definite It is a custom now in the war zone for soldiers to throw themselves prone on the ground when a shell is coming, or when an aeroplane approaches and surprises them in the open The reason for this is that as the shells strike they burst by contact into a number of pieces, varying from thirty to 300 These pieces scatter in every direction and take an upward and outward course, so that a man in a standing position necessarily runs a greater chance of injury than a man lying on his face Furthermore, shells breaking in the trenches with the men in a standing position necessarily inflict frequent injuries to the buttocks

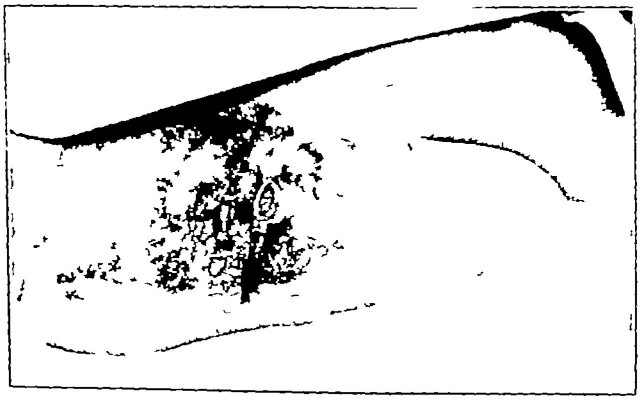


Fig 1—Deep, punctured shrapnel wound of the left buttock involving the sacrum Tetanus developed as a complication and caused death

The mortality of buttock wounds in a base hospital is high, not alone from the wound itself but also from the complications which follow these injuries When the same force is applied to the head, neck, abdomen or other vulnerable structures, the damage is such that the wounded soldier is not even brought to the dressing station, but is left dead on the field In severe buttock wounds, however, no vital structure is involved, and the patient is not immediately killed but is brought to the base hospital as a severely wounded patient

It has been my experience during a year's service, in which time we handled between 15,000 and 20,000 wounded, that in the severely lacerated wounds of the buttock involving the rectum, the mortality is quite as high as in patients with gunshot wound of the brain reaching a base hospital

The various injuries and complications of wounds of the buttocks that frequently prove fatal may well be considered under three headings tetanus infection, gas bacillus infection, and extensive lacerated wounds involving the rectum, or near the rectum, and deeply situated

TETANUS INFECTION

There are few tetanus cases among the British wounded This is due to the fact that as soon as a soldier is injured he receives a prophylactic dose of 500 units of antitetanic serum Out of 15,000 sick and wounded, we had but ten cases of tetanus Of these ten patients, eight had not had the prophylactic dose and two had The two who developed tetanus in spite of the prophylactic dose were both wounded in the buttock In a third buttock case, in Dr Speed's service, tetanus developed later, and I am unable to say whether or not this patient had had a prophylactic dose

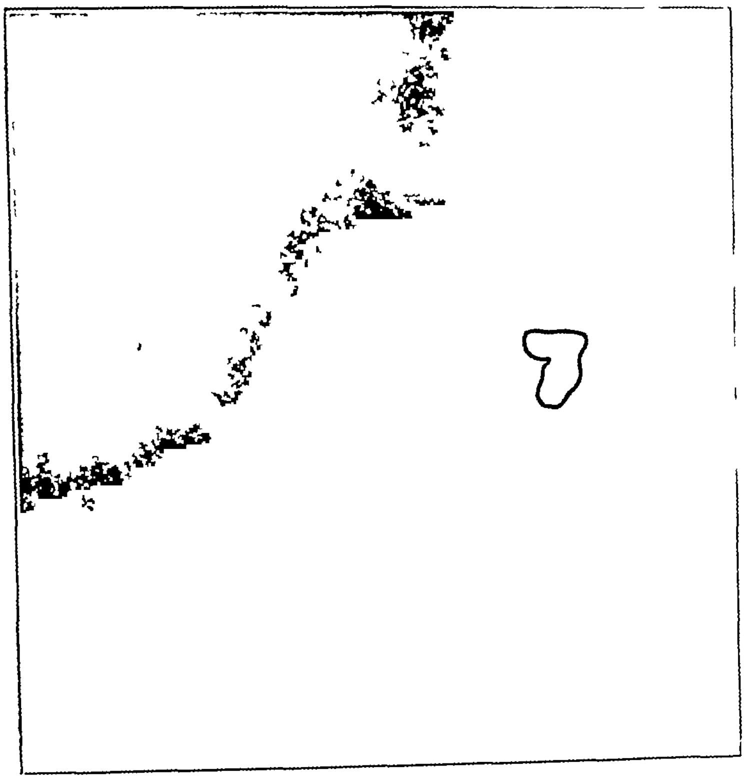


Fig 2—Roentgenogram in the case illustrated in Figure 1, showing shell fragment which was located on the anterior surface of the sacrum The entrance wound was through the buttock

The first two patients with buttock injuries who developed tetanus although they had received antitetanic serum died These patients had punctured wounds in the sacral region, with the missile deeply buried in the region of the anterior surface of the sacrum The third case of tetanus complicating buttock injuries was in an extensive wound of the buttock, offering a large exposed surface for infection We find tetanus, therefore, as a complication of buttock wounds in both varieties of wounds, the punctured and the open The great probability of these patients infecting themselves from their own feces must be considered

In 1890, Somani found tetanus bacilli in the fresh stools of different animals Noble found tetanus organisms in eleven out of sixty-one horses examined Pizzini found that about 5 per cent of human beings showed tetanus bacilli in the stools Breton and Petit, from their work, concluded that the toxin of tetanus organisms in the intestinal tract was either destroyed or was incapable of traversing the intestinal mucosa Matas, in 1909, noted that a large majority of the reported postoperative tetanus cases in the preaseptic and early aseptic eras were connected with operations on the female pelvis, and he calls attention to the tetanus in operations in sterile tissue in which postoperative asepsis cannot be assured on account of fecal discharge contamination, which may cause tetanus This contamination may result in operations on the genito-urinary organs, or operations in the anorectal and coccygeal regions, and on the inner surfaces of the thighs of both legs Wilms collected reports of ten cases after hemorrhoidectomy Horses have developed tetanus after castration Atkinson, in 1915, reported a case of postoperative tetanus following removal of hemorrhoids, and found six other cases reported by Matas, Shaw, Wood, Souchon, Gerrish and de Nancrede Jacobson and Wadsworth also reported cases Speed[1] reviewed the literature of postoperative tetanus, and reported six cases at the County Hospital, Chicago His cases resulted from operations for abdominal hysterectomy for fibroids, inguinal hernia, cholecystectomy, cholecystenterostomy, bilateral inguinal hernia and left inguinal hernia From this review of the literature, we see the importance of the consideration of the possibility of tetanus as a result of the contamination of buttock wounds by fecal discharge This subject will be taken up again when the surgical treatment of these buttock wounds is considered

GAS BACILLUS INFECTION

The gas bacillus infection of wounds of the buttock is a complication as serious as it is common in war This infection is introduced at the time the injury is inflicted, and the organisms are carried in with particles of clothing, especially when the injury is by shell fragments, which are irregular in outline and tend to carry ragged portions of clothing with them The rifle and machine gun missiles are less apt to carry in the clothing, and hence gas bacillus gangrene is less frequently experienced as a complication

One night our pathologist, Dr J S Archibald of St Louis, made cultures from the uniforms of thirty soldiers as they were brought from the trenches during the Battle of Loos Of thirty cultures made, twenty-three showed gas bacillus organisms

The mortality of gas bacillus wounds of the buttocks is higher than that of the extremities, as in the latter case amputation may be resorted to, but in the buttock wounds less radical procedures must be employed

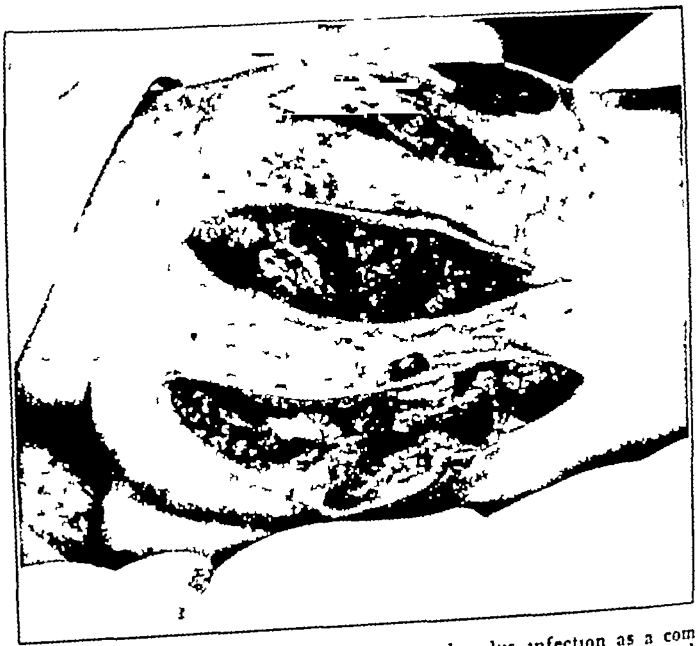


Fig 3—Wound of left buttock with gas bacillus infection as a complication Note multiple longitudinal incisions The patient recovered

The gas bacillus infection of the buttocks may be primary or direct, that is, in the wounds of the buttock itself, as described above or secondary or indirect In the latter case the infection extends upward between the muscle planes from a gas bacillus infection of the thigh Again, inversely, the gas bacillus infection of the buttocks may extend along the muscle planes and cause an infection of the upper thigh

---

[1] Speed, Kellogg Postoperative Tetanus, Surg, Gynec and Obst 1916, 22 443

EXTENSIVE LACERATED WOUNDS

The extensive lacerated wounds of the buttocks involving the rectum, or near the rectum and deeply situated are numerically by far the most important group of buttock wounds and deserve special notice During an offensive movement, when a base hospital is handling 600 wounded a night and a casualty clearing hospital a multiple of that number, and all hospitals must be evacuated daily to keep the line of communication free, many instances of this type of injury are noted, and prove perplexing to the surgeon to handle

From the time of injury until the patient has passed through the casualty clearing hospital and landed at a base, or sent to a general hospital, twelve, twenty-four, forty-eight or even seventy-two hours or more have elapsed During a greater part of this time the wound is bathed in feces, and certainly has been contaminated by the colon bacillus On account of the character of the injury, the patient is a difficult one to transport and care for properly In dressing the wound, lifting the patient and turning him from side to side, the medical officer requires fully as much assistance as in handling a fractured femur Moreover, during a rush period, after the medical officer has made his examination, it is only too often impossible for him to know every time the patient has a bowel movement, much less dress him, and hence the patient is turned over to the nurse or relegated to the tender mercies of an orderly It really is not a suitable case for a woman nurse to care for, and a poorly trained orderly, though willing, is quite incapable of caring for the patient properly The result is that this large wound becomes an infected area of great dimension and the patient early succumbs to the absorption of the toxins of the colon bacillus and other pus-forming organisms

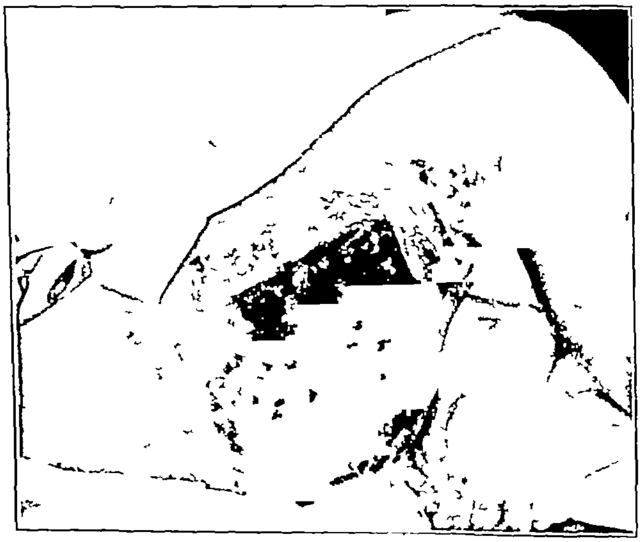


Fig 4 —Type of buttock wound near anus which is easily infected by fecal discharges

Having lost a number of cases as described above and appreciating the high mortality in this type of wounds I resorted to an early colostomy as a routine procedure and there is no doubt that a number of patients were saved by so doing

TREATMENT

The treatment of wounds of the buttocks may be considered under prophylaxis, diet and surgical procedure There is no question of the excellent results of the prophylactic dose of 500 units of antitetanic serum employed in all cases of these wounds That it is not a sufficient dose in all cases, as we have noted in our buttock wounds, is certain Therefore, considering the possibility of a secondary tetanus infection from the patient's feces, it seems advisable to give a second prophylactic dose of 500 or 1,000 units of antitetanic serum when the patient with a buttock wound is admitted to the base hospital

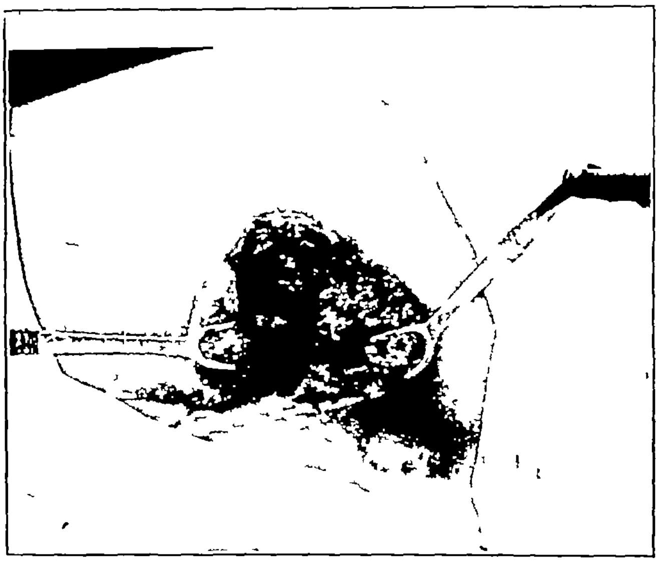


Fig 5 —Wound of right buttock inflicted by a trench mortar The base of the bladder and the prostatic urethra were shot away The rectum was not injured but the fecal discharges infected the exposed raw surfaces. An inguinal colostomy was made and the patient recovered

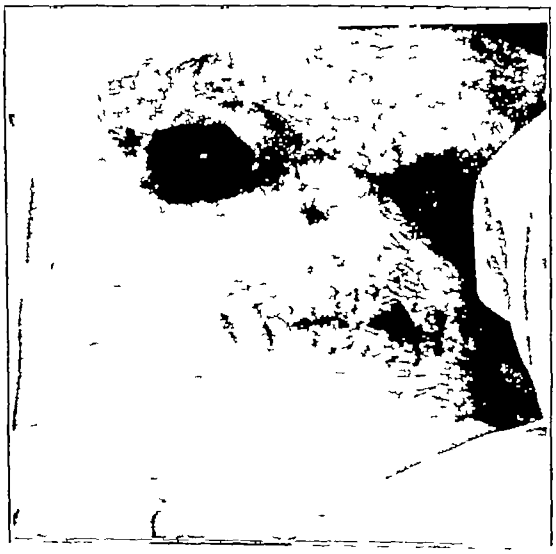


Fig 6 —Same patient as in Figure 5 left inguinal colostomy

The diet of these patients should be free of food that might be a tetanus organism carrier The products which might harbor these organisms, as Matas pointed out, are raw vegetables, lettuce, celery, cabbage, watercress, radishes, tomatoes etc, and raw fruits strawberries, blackberries, etc An early catharsis also should be established to eliminate any is placed in a large bottle and about 1 or 2 gm of copper dust is added The bottle is tightly corked and thoroughly shaken for several minutes and allowed to stand until the copper has settled This is best done by allowing the mixture to stand over night The larger portion of the overlying fluid is then decanted off, the remainder being thoroughly shaken and filtered, care being taken that all of the copper is washed out of the bottle The residue is washed first with alcohol, and then with ether, following which the filter is spread out and air dried After the copper has thoroughly dried, it is placed in a small bulb which is made from a 4 to 6 mm glass tube (Fig 1) A small funnel (Fig 1 2) made by drawing out a test tube to the desired size should be used in placing the copper in the bulb, thus keeping the walls of the tube free from copper To the copper dust is now added one or two small pieces of magnesite, which on being heated gives off carbon dioxid gas, thus forcing the mercury along the tube A small bit of washed asbestos is inserted into the tube just above the bulb so as to prevent the copper dust from coming in contact with the gold while the bulb is being heated The tube is now constricted just above the asbestos, usually about an inch from the bulb (Fig 1, 3), and a small piece of dental gold leaf is loosely inserted into the constricted portion of the tube If the gold leaf is allowed to become hot, the amalgam readily disappears, considerable care, therefore, should be taken when minute quantities of mercury are being tested for, to keep the gold perfectly cool For this purpose it is well to wind a wet piece of filter paper around the tube at the point of constriction

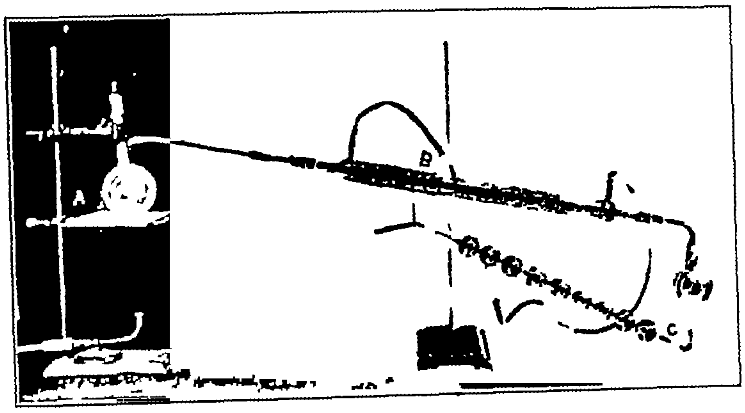


Fig 2—Apparatus *A* flask *B* water condenser, *C*, "ten bulb" tube

The bulb is then gently and uniformly heated so as to avoid a blow-out It is gradually brought to a red heat, at which time all traces of mercury have been volatilized and deposited on the bit of gold leaf as an amalgam This amalgam is very evident to the naked eye when the quantity of mercury is more than one-twelve-thousandth mg Beyond this point it is advisable to use a hand lens to detect the small pin-point amalgamations which are not visible to the unaided eye

In dealing with fluids which contain large amounts of protein material, such as blood, it is necessary to dissociate the mercury and protein before the test can be made For this purpose the blood is placed in a distilling flask to which is added an equal amount of concentrated sulphuric acid The flask is attached to a water condenser and this is connected with a "ten-bulb tube" containing a small amount of distilled water, in which the distillate is collected (Fig 4) The flask is gradually heated until sulphuric fumes are given off, at which time all of the mercury has been volatilized and is collected in the bulb tube The condenser is carefully washed with distilled water in order to remove any particles of mercury which may have been deposited in the tube Powdered copper is then added to the distillate, and the procedure from here on is as described above

With this method I have been able to detect one-fifteen-thousandth mg, or in other words, approximately one millionth grain of mercury dissolved in 500 c c of distilled water Mercuric chlorid was used in determining the delicacy of the test, and in each instance the test was carefully controlled By the courtesy of Dean Victor C Vaughan of the medical school and Prof Hobart H Willard of the department of chemistry of the University of Michigan, the accuracy of the test has been checked up in their respective laboratories

The value of any test lies in its delicacy and simplicity In the first place, we have been unable to find a test thus far described by which mercury can be detected in a smaller quantity than one ten-thousandth mg, and for the most part the tests ordinarily employed are sensitive only to one-fortieth to one-five-thousandth mg Thus it is evident that our test is far superior to any other in delicacy In addition, the test herein described has an added advantage over other delicate tests in being macroscopic

In the second place, most of the delicate tests which have been heretofore employed require extensive laboratory facilities or expert chemical knowledge and experience Among such tests may be mentioned the electrolytic method of Smithson,[3] which is not as sensitive as ours and has the added disadvantage of requiring elaborate apparatus also the method of Raaschou,[4] in which the mercury is precipitated by hydrogen sulphid together with copper The two sulphids are then volatilized with lime and lead chromate, and the mercury is collected in capillary tubes as metallic globules It is evident that this test requires expert knowledge of chemistry

Perhaps the most commonly used method is the one advocated by Wormley[5] This test depends on the deposition of the mercury on copper foil in an acidulated solution The mercury is then volatilized by heat and collected in a capillary tube, in which it is seen microscopically as small globules In the first place, the globules are not easily recognized by the untrained chemist, and small particles of dirt may be easily mistaken for mercury In the second place, the copper foil does not offer the large surface area which is presented by the copper dust, and therefore does not extract all of the mercury from the solution We have been able to prove this by obtaining a positive test for mercury by our method in a solution from which no more mercury could be removed by the copper foil method as described by Wormley

Our test is delicate and relatively simple The method employed, when the solutions to be tested are relatively free from protein material, can be carried out by any one who is familiar with ordinary laboratory technic, and the materials necessary may be easily obtained

---

A DEVICE FOR THE CONTROL OF HEMORRHAGE FOLLOWING SUPRAPUBIC PROSTATECTOMY

H G Hamer M D, Indianapolis

Of the many methods suggested to control hemorrhage following suprapubic prostatectomy, such as gauze packing and fat implantation, the use of the inflated rubber bag of Francis R Hagner of Washington, D C, has been found most satisfactory After the enucleation of the prostate is completed a curved staff is inserted through the urethra into the bladder and its tip made to protrude through the suprapubic opening Over the protruding end of the sound or staff the rubber tube which is attached to the bag is pushed The sound is then withdrawn, and with it the tube which brings the rubber bag into the bladder The bag is distended with air or water and then drawn down into and against the vesical orifice, thus compressing the cavity from

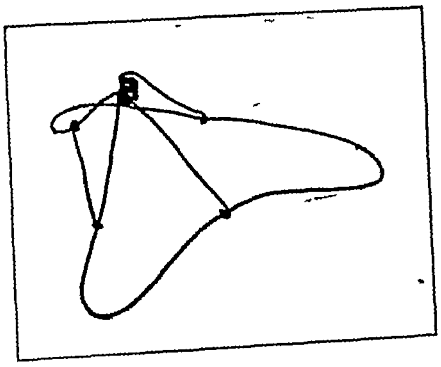


Fig 1—Wire anchor for inflated bag, length 7½ inches, width, 7 inches height 3½ inches

which the prostatic tissue was removed. Hemorrhage can be controlled only if this inflated bag is held securely in position

---

[3] Smithson, quoted by Lannoy and Leroux Compt rend Soc de biol 1902, p 1483

[4] Raaschou Ztschr f analyt Chem, 1910, 49, 172

[5] Wormley Toxicology, Ed 2, Philadelphia, J B Lippincott Company, 1885

One of the difficulties encountered has been fixation of the bag in position Usually this has been done by clamping the tube where it emerged from the penis, or the outer end of the tube was drawn down on the thigh and fastened by means of adhesive straps Both of these methods are insecure, and if much tension is made on the tube following the former method a great deal of soreness of the urethra follows because of constant pressure on the meatus I am indebted to Dr Carl Lewis Wheeler of Lexington Ky , for the suggestion of the need of some mechanical device which would maintain direct pressure over the area of operation after prostatectomy and for his description of the device of Dr Townsend of Rutland Vt He and I agreed to try to develop some method of exerting pressure for control of hemorrhage The device presented is the result of the efforts which I have made in that direction and its practical application has demonstrated its value

In October 1916 I devised the wire anchor here presented for the purpose of accurately fixing the pressure bag after the latter has been properly placed and dilated with air Immediately after the operation, the Hagner bag is drawn through the bladder in the usual manner The tube from the bag is brought through the hole in the summit of the wire anchor The bag is then distended by injecting air from a large syringe Tension is made on the tube, bringing the bag down into the neck of the bladder, with as much pressure as desired and held in this position by the little screw clamp just outside the hole in the summit of the wire anchor The anchor is made of soft copper wire of sufficient size to have some rigidity and sufficient strength to hold any tension that might be made on it for this purpose The flexibility of the wire anchor allows it to be molded to fit the individual patient It is not in the way of the dressings which may need to be changed before the removal of the Hagner bag, which is usually allowed to remain from twenty-four to forty-eight hours in order that any recurrent hemorrhage may be immediately controlled The apparatus was described by Dr W N Wishard at the Evansville meeting of the Ohio Valley Medical Association last November

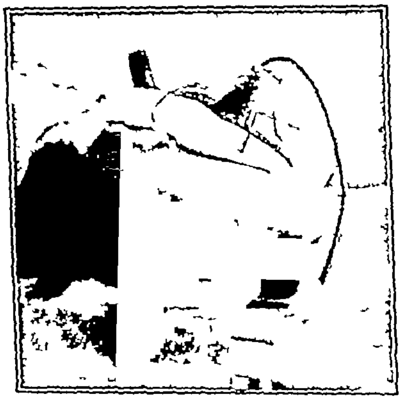


Fig 2 —Wire anchor in position before application of outer dressings

---

A CASE OF BROMODERMA, OR BROMO IODODERMA

John E Lane, M D New Haven Conn

Bromid and iodid eruptions are among the most frequently seen drug eruptions The case reported herewith belongs to the rarer though perfectly well recognized type of bromid eruption It is unusual on account of its severity and the fact that part of the development of the lesions was probably due to the simultaneous use of iodids for a short time previous to its appearance. As bromid and iodid eruptions of this type resemble each other it is impossible to define the part played by each drug in this case. and so it would seem best to classify the eruption as a *bromo-iododerma tuberosum fungoides*

S L a girl aged 5 months of Polish parents was referred to me March 18 1917 by Drs D M Lewis and C S de Forest The child had had convulsions since birth frequently as many as twenty in a day When about a month old, mercurial treatment had been given for a few weeks No definite information in regard to the treatment given from this time up to three weeks before my visit could be obtained

For three weeks previous to the time at which I saw the child she had been given 8 grains of potassium bromid daily, and for a week or ten days also 4 grains of potassium iodid Both of these drugs had been stopped once or twice when there were not more than eight convulsions in twenty-four hours The present eruption had developed very rapidly, had been present about a week, and at its beginning had been diagnosed as chickenpox

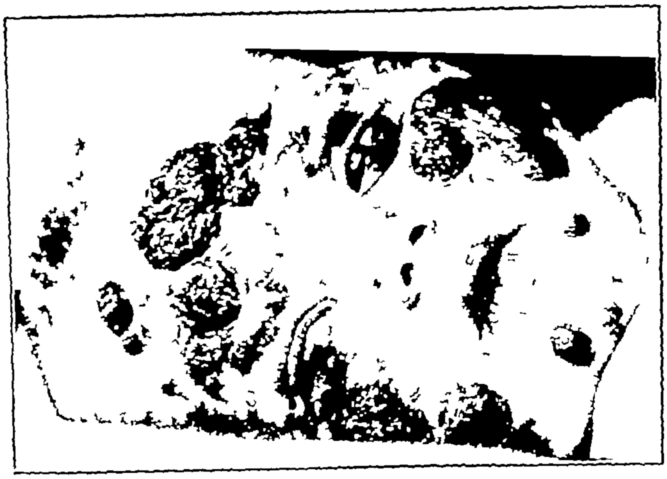


Fig 1 —Appearance of eruption when patient was first seen

The child was well developed and well nourished The appearance of the eruption is shown in Figure 1 On the face there were about twenty vegetating, somewhat condylomatous growths, circular or polycyclic in outline. The larger ones were evidently formed by smaller ones having grown together as they extended They varied from 0 5 to more than 6 cm in diameter The largest ones were elevated about 2 cm above the surface of the skin Their color varied from nearly that of arterial to that of venous blood During convulsions the larger growths frequently bled On the buttocks was a discrete apparently vesicular eruption of the more usual type of bromid eruption There was little fluid in the vesicles at this time as vegetating growths had begun to appear under the unbroken epidermis

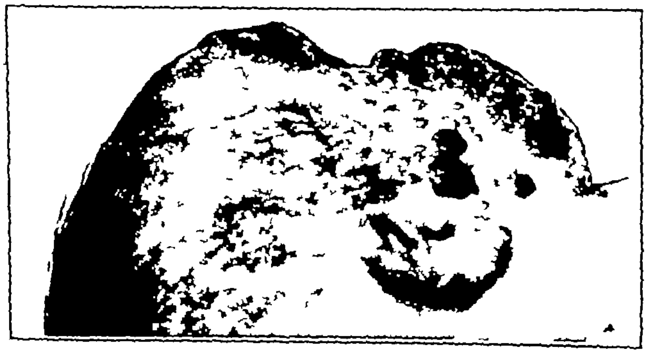


Fig 2 —Appearance of eruption about one week later

The child was immediately referred to Dr J I Linde, who admitted her to his service in the New Haven Hospital For about ten days the growths increased somewhat in size, after which they gradually began to grow smaller The second illustration taken about a week after the child was admitted to the hospital shows the elevation of the growths and also a vesicular eruption of two days' standing which if seen by itself might easily have been mistaken for chickenpox

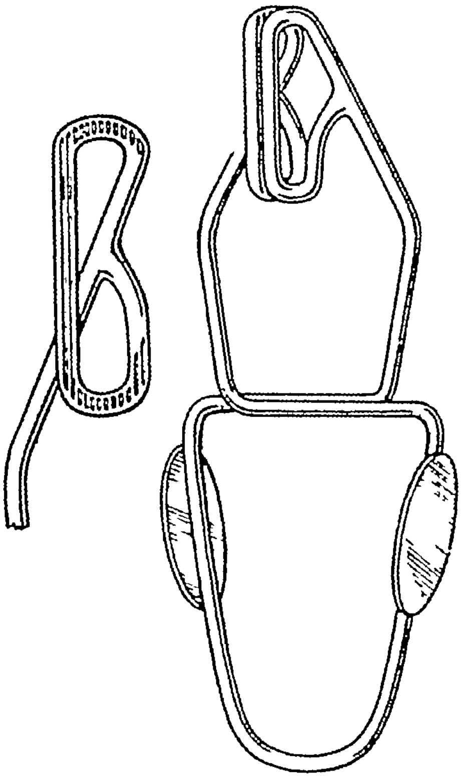
59 College Street

A NEW URETHRAL CLAMP

H W E Walther, M D, New Orleans

It is frequently found desirable to retain medicated fluids or jellies in the anterior urethra of the male over a prolonged interval As it is rather tiresome for either the patient or the medical attendant to employ digital compression to the meatus urinarius for the required length of time, I have devised a simple urethral clamp which answers admirably the purpose for which it is designed As it is believed to possess some advantages over similar instruments previously recommended, a description is given herewith

The idea of using a clamp for this purpose is not a new one Any number have been on the market for years and have been extensively used by urologists The main objection to those heretofore recommended, with probably one exception, is that they are so constructed as to require clamping the penis behind the corona glandis in order to prevent the instrument's slipping This sort of instrument fails to permit medicaments to be retained in the first inch of the anterior urethra including the fossa navicularis—a portion of the canal too important to ignore


Urethral clamp

The exception mentioned is the Cunningham clamp I am indebted to Dr Nelken for having first demonstrated this clamp to me The objections found to this instrument are that the spring of the instrument is not sufficiently strong to compress the meatus properly so as to retain the urethral medicament, it is awkward of application, there being no arrangement whereby the blades can be pried apart, and even after being properly applied it frequently slips off

It is believed that these faults have been corrected in the new clamp, the illustration of which leaves little to describe Constructed of a single piece of finest quality steel wire 2 mm thick, of figure-of-eight shape and with a strong grasp, it measures 8 cm long by 3 5 cm wide Finger grips are conveniently placed, one on each side of the lower part of the clamp frame The blades proper for compressing the meatus are each 2 cm by 1 cm, on their inner surfaces they have serrations which prevent slipping, once the clamp is properly applied The inner surface of one of these blades with serrations is shown, greatly enlarged, in the inset on the left of the illustration, so as to bring out its exact construction The latter feature adds no little value to the merit of the instrument The clamp can be easily sterilized, lasts indefinitely, and will stay where it is placed Although the clamp has a very firm spring, the blades are so constructed that no pain is experienced in its application

For the purpose of obtaining a prolonged action from solutions or jellies of the silver salts in the anterior urethra, as well as for producing local anesthesia by means of solutions of novocain, etc, I have found this clamp a distinct aid

Apart from the uses to which the physician may put the clamp, it has been found practical to have patients with anterior urethritis use the clamp themselves, for a patient can be persuaded to introduce medicaments into the urethra, apply the clamp, and retain the injection for fifteen minutes without effort Few will hold the urethra closed for this length of time if the fingers are required From an esthetic standpoint the clamp should be considered superior to the collodion "sealing-in" method of treating urethritis, because the clamp is safe, while a cotton-collodion dressing, even when applied by those most skilled, has a tendency to loosen at most inopportune times with results too obvious to require delineation

The clamp was made by I L Lyons & Co, New Orleans Macheca Building

---

APPARATUS FOR WRITING WITH THE KNEE

Arthur T Blachly, M D, Portland, Ore.

This apparatus is designed to permit persons of either sex who have lost their hands or the use of them to write legibly with their knees after a little practice A piece of sole leather 15 inches long and 6 inches wide at one end and 4 at the other has a semicircular piece cut out on each side, 5 inches from the narrow end This piece of leather is bent where the scallops come to fit over the bent knee, and the whole piece is bent from side to side By two clips, such as are used in holding a pencil to the pocket, a pencil is fastened to the leather so as to project forward 4 inches in front of the knee

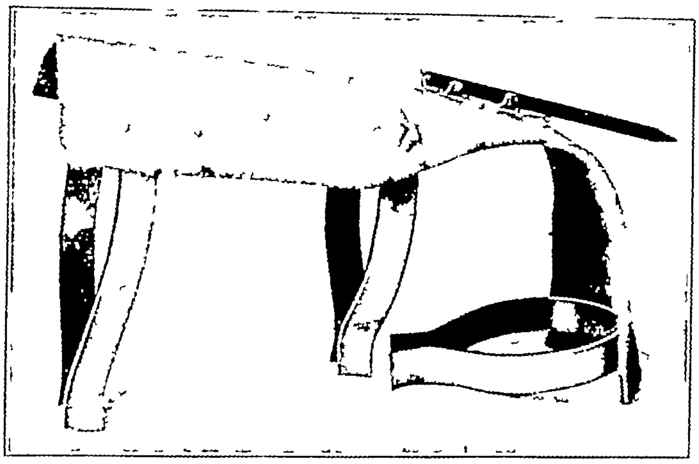


Fig 1—Apparatus for writing with the knee

This apparatus is held firmly to the knee by three strong brass springs attached by rivets These are ¾ inch wide and are made of strips 12, 13 and 14 inches long, respectively To hold the paper in the proper position a small rack like a music rack is made of wood with a hook to adjust and hold it to a small, firm stand 2 feet high

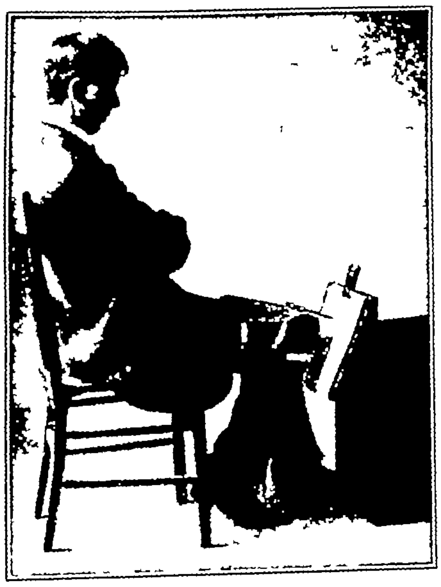


Fig 2—Method of using knee writing apparatus

In writing, the heel is raised, and the foot, resting on the ball, gives the knee quite a wide range of motion A stylographic fountain pen can be used as well as a pencil

The device can be made cheaply The model cost $1 50 and the springs could be replaced with straps costing 10 cents apiece, thus reducing the cost to $1 10 This device should be much more convenient than holding a pencil between the teeth or toes, as was formerly done by some The stand can be made of an apple box, and a shelf put in it to hold the apparatus

4411 Woodstock Avenue

Therapeutics

DISTURBANCES OF THE KIDNEYS

(Continued from page 1674)

PYELITIS

Pyelitis develops from any obstruction of a ureter, whether of external or internal cause, from calculi, blood or bacteria in the pelvis of the kidney, from infection of the kidney substance, from tuberculosis of a kidney, from adjacent suppuration, and from an ascending infection of the bladder or pelvic organs

If the ureter is not obstructed, germs reaching the kidney and being rapidly excreted, or even the reproduction of certain germs in the pelvis of the kidney, such as colon bacilli or typhoid bacilli, may not cause pyelitis If, however, the ureter is obstructed, if the canal is imperfect, or if there is a chronic irritation or inflammation of the pelvis of the kidney, pyelitis sooner or later occurs Infection or pyelitis of one kidney is a menace to the other

Intestinal upsets, especially when aggravated by frequent constipation, allows the colon bacillus and other germs to reach the kidney through the lymphatics, and not infrequently in these conditions colon bacilli are found in the urine These may disappear on the correction of the intestinal stasis At times the colon bacilli may reach the kidney by way of the blood

Direct ascending infection from the bladder through the ureter to the kidney is not frequent, except when there is urethra or bladder obstruction, such as an enlarged prostate Infection of the bladder and pelvic organs may reach the kidneys through the lymphatics This has recently been shown by Eisendrath and Schultz[126]

While in the majority of cases the colon bacillus is the germ of infection, the tubercle bacillus, the typhoid bacillus and the various pus-producing germs are also causes of pyelitis, and, of course, frequently more than one variety of germ is present

Females have infected kidneys more frequently than males, this is especially true in young children The exact reason is not clear Though the ease with which vaginal infection reaches the bladder may be a factor in the cause of kidney infection, in pregnant women it is doubtless due to some ureteral obstruction from pressure or twisting with the consequent dilatation of the renal pelvis, as stated, such a kidney is susceptible to infection

SYMPTOMS

A kidney infection may cause only a bacilluria as evidenced by a slightly cloudy urine with a peculiar fishy odor, or it may cause a slight cystitis, with cloudy urine and an increased amount of mucus, perhaps followed by pus Only cystoscopy and the passage of the ureteral catheter will determine whether one or both kidneys are affected In these cases, if the urine is strongly acid there is less bacilluria and the urine is less cloudy than when it is alkaline in reaction Localized pain, a loose kidney, or a palpable enlarged kidney may presumably show which kidney is affected It is probably rarely found that pus comes from the two kidneys at once, but a purulent infection of one kidney sooner or later causes inflammatory or other disturbances of the other kidney

A colon infection and bacilluria may continue for months without the development of pus and without causing many symptoms, but if pus is issuing from a kidney, there is almost invariably a history of pain, with colicky ureteral pains, in an exacerbation of which blocking of the ureter often occurs The urine at this time coming from the healthy kidney may be clear After the urine and pus back of a blocked ureter force a passage, a large amount of pus suddenly appears in the urine While the pus is being retained and not freely evacuated from the kidney, fever generally occurs, often preceded by chills, rigors, and frequently by attacks of profuse sweating Repetition of this history is typical of a purulent pyelitis

These purulent urines from a kidney source are generally acid in reaction, and contain albumin often more than can be accounted for by the pus, and, sooner or later, casts Frequently, however, there may be no albumin in the urine after the pus has been filtered out

There is usually progressive loss of weight, loss of appetite, indigestion, restlessness during the night, and finally anemia A somewhat constantly recurring afternoon or evening rise of temperature suggests a tuberculous infection, while an ordinary septic infection generally causes fever only when there is an obstruction to the free flow of pus Hence a purulent pyelitis may go on for months without apparent fever

It has long been recognized that typhoid bacilli may be found in the urine for weeks or even months after typhoid fever It has been shown also that not infrequently tubercle bacilli may appear in the urine when there is a tuberculosis of some part of the body, especially of the lungs, even though the kidneys may not be involved These bacteria, unless associated with secondary infection, may not produce symptoms, and do not cause pus Doubtless colon bacilli occur in the urine on account of some stasis or intestinal indigestion much more frequently than is now known, and probably generally without causing symptoms

The amount of pus in the urine may diminish and entirely disappear for a time and then recur, in the interim, however, the urine, if cultivated, may show germs

(To be continued)

Wild American Digitalis

The present scarcity of some varieties of botanical drugs has led to the search for new sources of supply Following the suggestion of the late M I Wilbert, an examination of samples of wild-growing digitalis which has now become a weed in various parts of the United States, was undertaken by the division of pharmacology of the Hygienic Laboratory, U S Public Health Service (*Public Health Reports*, March 9 1917) Four samples of the wild plant from Oregon and one from Washington, together with samples of the cultivated plant from Wisconsin and Ohio, were collected at varying periods of their growth and air dried under favorable conditions the leaves were extracted, and tinctures made according to the U S P method were tested physiologically by the one hour frog method The conclusion reached from the investigation was that the wild digitalis found in the northwestern states may be used as a source of supply for the various official preparations of digitalis and that by using the ordinary methods of handling and preparing the leaves a highly active product may be secured which compares favorably with the activity of the cultivated leaves grown under more favorable conditions

---

[126] Eisendrath D N and Schultz O T Lymphogenous Infection of the Urinary Tract The Journal A M A Feb 17 1917 p 540

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street . . Chicago, Ill.

Cable Address . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

Contributors, subscribers and readers will find important information on the second advertising page following the reading matter

SATURDAY, JUNE 9, 1917

THE FOOD REQUIREMENT OF HEALTHY CHILDREN

So much attention has recently been devoted to the problems of nutrition and the energy transformations of the adult body that the requirements as expressed in units of food fuel are beginning to be better understood both by the professions which have to deal with diet and by the laity It would be an exaggeration to say that many persons are qualified to speak of daily food in terms of calories as they discuss gallons of gasoline or tons of coal in connection with other affairs of daily life But there are signs of a more tolerant attitude toward the new language in which human dietary needs are best expressed The exigencies of the present moment have served to focus attention more firmly than ever on what the nutritive needs of living bodies really involve

For the long period of childhood and adolescence the available information is still far from adequate, and what is known has not yet become as readily accessible as it ought to be A few years ago it was customary, in calculating dietary needs, to figure the portion belonging to the children of the family in terms of some roughly fixed fraction of the daily allowance for grown-ups There is, however, an enormous range of variation in the food needs of children occasioned by the unlike physiologic status of these individuals at different ages and stages of growth Age, size and activity occasion distinctive demands which have come into bolder prominence since the relief of enormous numbers of children of all descriptions has become a national duty in many parts of the world

It has been said that when food is unrestricted, and the appetite is of the healthy juvenile character, there need be little fear of undernourishment But delicate children do not always have a normal appetite, and where the food distribution is controlled as it is in public institutions, where a free choice or unlimited supply is not always permitted, the possibility of error expressed in malnutrition or retarded growth is ever present It is peculiarly timely, therefore, to have a summary of the best evidence now available, such as has just been published by the New York Association for Improving the Condition of the Poor[1] Its avowed object is to furnish a survey of the literature, observations, and experiments pertaining to the food requirements of children so that it will become easier to make an intelligent allowance for the adequate nourishment of children and at the same time to reach as many needy families as possible As the author says, "while it is apparent that insufficient food may result in serious harm to the children, it is equally clear that an unnecessarily liberal allowance to some families may mean the denial of food to many others where thousands of dollars are used in relief"

The statistics collated in the New York survey of the evidence regarding food allowances for healthy children represent the indications furnished by three independent types of investigation, namely (1) dietary, or observation studies in which the weight of the food eaten by the subject was recorded for a given period of time, and the food values either determined by analysis, or more commonly calculated from figures representing average composition, (2) metabolism or balance experiments in which the intake and output were compared by determining chemically the composition of both the food eaten and the excretory products, thus showing the amount of nitrogen retained in the body for growth of protein tissue, and (3) respiration experiments in which the actual heat produced by the body was either measured directly in an air-tight chamber impervious to heat, or calculated from the amount of oxygen consumed and the carbon dioxid exhaled Since it is known that the oxidation of food yields energy, it follows that a measurement of the oxidation of foodstuffs in the body will give the amount of energy produced This is usually and most conveniently expressed in calories

In a general way the available data furnished by these three somewhat unlike methods of approach are quite similar The averages may be summarized as in Table 1

TABLE 1—CALORY REQUIREMENT OF CHILDREN AT DIFFERENT AGES

Ages, Years	Calories	
	Boys	Girls
From 2 to 5	1,309	1,245
From 6 to 9	1,797	1,575
From 10 to 13	2,337	2,015
From 14 to 17	2,534	2,253

It will be noted that there is a difference between the requirements for the children of the two sexes It might be thought that this is due solely to differences in size at the same age This seems less likely at present than the assumption of unlike bodily activities, on which a part, at least, of the different needs depends It is believed that the two sexes have the same basal requirement, that is, the amount of energy required for the maintenance of such internal activities as respiration, heart beat and circulation of the blood, and attainment of suitable muscular tone is comparable

---

[1] Gillett, Lucy H A Survey of Evidence Regarding Food Allowances for Healthy Children, Publication 115, New York Association for Improving the Condition of the Poor, 1917

Age is the largest factor in determining the food requirement of the young Per unit of weight the amount of energy required for "the mere processes involved in remaining alive" — in other words, the basal need — decreases with increase in age Although these facts have long been recognized, the unusually conspicuous activities of growing children — a factor added to age and size — have not been so thoroughly appreciated in taking account of the proper food demands of the young To this must be added further the requisite quota for increment of tissue or growth Gillett[1] has further pointed out that greatly emaciated children with depleted tissues, which can and ought to be rebuilt rapidly, should receive a more liberal food allowance than would be required by normal children either of the same age or of the same weight If suitable nutritive conditions are established, recovery or repair can proceed at a speed out of all proportion to the usual rate of growth at the same age

In view of these considerations, involving features that are highly important rather than novel, we are admonished to adopt the recommendation of Sherman that the food requirement (calories per day) of each member of a family be estimated on his own merits A small inactive man may require less than a large active boy or girl This should be recognized and provided for The upshot of the New York survey has been the compilation of a new set of "Standards" (Table 2) which deserve widespread recognition because of the care and intelligence with which they have been prepared

TABLE 2—FOOD ALLOWANCES FOR CHILDREN[1]

Age Years	Calories per Day	
	Boys	Girls
Under 2	900 1 200	900-1 200
From 2 to 3	1 000 1 300	980-1 280
From 3 to 4	1 100 1 400	1 060-1 360
From 4 to 5	1 200-1 500	1 140-1 440
From 5 to 6	1 300-1 600	1,220-1,520
From 6 to 7	1 400-1 700	1 300 1 600
From 7 to 8	1 500 1 800	1 380-1 680
From 8 to 9	1 600-1 900	1 460 1 760
From 9 to 10	1 700-2 000	1 550-1 850
From 10 to 11	1 900 2,200	1 650 1 950
From 11 to 12	2 100-2 400	1 750-2 050
From 12 to 13	2 300-2 700	1 850-2 150
From 13 to 14	2 500 2 900	1 950-2,250
From 14 to 15	2 600-3 100	2 050-2 350
From 15 to 16	2 700-3 300	2 150-2 450
From 16 to 17	2 700-3 400	2,250 2 550

Quoting the report, the limits given make allowance for individual variation If a child is tall and growing rapidly at 6 years of age, he may — and probably will — require 1,600 calories If of smaller frame, an allowance of only 1,400 or 1,500 calories will be necessary with a normal amount of activity If he is both large for his age and very active, he will doubtless require the upper limit of the allowance, 1 700 calories It will be seen that this range of calories may be used to provide for the actual needs of each individual child at any age

WAR MEASURES AGAINST TUBERCULOSIS

Our entrance as a nation into the war has made it necessary, as probably no other turn of events could have done, to take stock of our resources in all useful activities We must sort the chaff from the wheat, the luxury from the necessity, the well tried and reliable from the dubious This is not the time for theory In the fight against tuberculosis, those measures which are merely theoretically pretty, those which are of dubious value, and especially those which are known to be worthless, should be eliminated

The essential facts of tuberculosis were recently summed up by Dr Theobald Smith [1] We may deduce from this summary certain working principles 1 There is every reason for continuing adequate rational measures for the restriction of tubercle virus in transit, that is, from sick to well 2 Logically the first step in preventing the spread of tuberculosis is to render patients in the advanced cases harmless to others 3 In the incipient cases they should receive treatment, looking to their cure, and the prevention of their becoming dangerous 4 Recrudescence from latency is mostly produced by untoward conditions of life which lower general or local resistance Resistance is kept up by normal conditions of life as regards food, shelter, rest, air, etc 5 The only increase of resistance which can be achieved by treatment with tubercle bacillus preparations is that caused by the *injection* of living tubercle bacilli — in other words, "no tubercle, no immunity" "We cannot afford to play with this dangerous method" 6 Tuberculous *infection* with the bovine type, derived from cow's milk, is not in general a disease concerning human epidemiology, since it is not transmitted from man to man as is the human type 7 The theory that *infection* is always obtained in early life has not been conclusively proved

Translated into terms of action, this means that we must continue to apply well tried rational measures, and in as rapidly widening scope as the increased demands on our facilities will permit Patients with advanced and dangerous cases must as far as possible be segregated in hospitals, or instructed and supervised The incipient cases must be detected early and official notification made Dispensary and sanatorium treatment should be provided A large part of the increase of tuberculosis noted in those European nations which have borne the severest brunt of the war is contributed by recrudescences in those "cured," "arrested" or "latent" cases in which, under normal conditions, the patients would for the most part have continued in comparatively good health Persons of this class constitute a hard problem for those who will administer the selective draft, either for military or for industrial service While some patients have been benefited by the outdoor regimen, others have speedily succumbed to the hardship There is, however, one outstanding fact which we can apply Unless the population as a whole is well nourished, we may expect an increase in the number of recrudescences In a short time this will throw on our hands an enormous number of dangerous cases If we cannot take care of these patients they will play their grave part in the vicious circle of tuberculosis transmission The European figures available are too fragmentary for definite conclusions, but we should profit by the hint that the fat shortage is perhaps a serious deficiency in the dietary of certain of the stricken nations To prevent bovine infection from milk, it must be pasteurized or boiled We cannot wait for the establishment of nontuberculous herds

---

[1] Smith Theobald Certain Aspects of Natural and Acquired Resistance to Tuberculosis and Their Bearing on Preventive Measures The Journal A. M A March 3 1917 p 669 March 10 p 764

So much for what we must attempt to accomplish It is supremely important that neither time nor money be wasted on methods which have no demonstrated value, or on those which have been shown to be worthless It would seem scarcely necessary to mention the latter, were it not for the fact that enthusiasts, cranks, and worse than these, are perennially active in trying to secure in influential circles the adoption of various serums, vaccines and other preparations which pretend to prevent and cure tuberculosis It would appear that certain of these products are being "boosted" by the concerted action of persons who would expect to profit by their adoption Under the disguise of a scientific or even an altruistic veneer, they advertise their wares in medical journals The similarity of their phraseology and argument betrays their common interest in a concerted "drive"

We can easily avoid the alluring representations of propagandists of this class — alluring because of the guise of science and altruism which they assume — by holding fast to one fact established by all of the serious work on tuberculosis since Koch, that in order to induce immunity to tuberculosis one must first introduce living tubercle bacilli, and that even this immunity is transient and only relative, and certainly impracticable

The material reduction in the tuberculosis death rate in the past fifty years has not been due to the use of any serum, vaccine, tuberculin or drug It has been due to a combination of sociologic, sanitary and hygienic changes, some deliberately planned and others inevitably accompanying what we call "progress" We cannot name or even trace all of these factors, but we can safely attribute much of the improvement to better and more food per capita, better housing conditions, less exposure to hardship, earlier diagnosis and consequently earlier treatment, the growth of the hospital, sanatorium and dispensary idea, better milk, and finally a more enlightened attitude on the part of the public toward the transmissible diseases

In this emergency we must retain and encourage the intensification of the methods and conditions which have proved valuable in the past, and which no radical innovation has as yet arisen to supplant

NEWER FEATURES OF ADEQUATE DIETARIES

The lecture of McCollum of the University of Wisconsin on the supplementary dietary relationships among certain of our naturally occurring foodstuffs, which was given before the Harvey Society of New York and recently published in The Journal,[1] illustrates the remarkable innovations which recent years have brought about in the study of the science of nutrition It reviews the experiences in feeding experiments which have wrought these changes, and indicates why the supposedly ideal plans of a decade or more ago to nourish animals on diets composed of purified protein, carbohydrates, fats and inorganic salts with cellulose as "roughage" — a ration theoretically correct from the standpoint of that time — were doomed to failure

Ever since Hopkins[2] reported his observation that the addition of small amounts of milk to food mixtures consisting otherwise of purified protein, fats, carbohydrate and salt exerted a favorable influence on nutrition which was out of all proportion to the caloric value of the added milk, it has become more and more probable that there are certain as yet unrecognized substances, present in many of our natural foods, which are indispensable, in an otherwise adequate diet calculated to promote perfect nutrition The story of how these so-called vitamins have come into prominence as something to be kept in mind and provided for in the construction of the dietary has been told from time to time in these columns[3] as new contributions have been added to our store of facts

At the present moment the foremost American workers in the study of nutrition are inclined to postulate the need of at least two types of vitamins, one of which is soluble in fats and is present in such natural products as milk, beef fat, cod liver oil and egg yolk, but not in any notable abundance in the ordinary vegetable oils or the common cereals The other, water-soluble vitamin, is more widely distributed where active cell structures are found, and is conspicuous in milk and eggs

The enthusiasm for these new ideas has tended, for the moment, to divert attention from other equally important and perhaps equally novel aspects of the subject Since various factors essential to the dietary are now clearly recognized, it is quite possible to compound a ration in which one or more of them is lacking Nutritive disaster then ensues sooner or later It remains to be seen, says McCollum, whether or not the animals which have been brought experimentally into a condition of nutritive disaster by a series of diets, each of which was faulty in respect to only a single dietary factor, as inorganic salts or protein, or the unknown A or B, will reveal to the histologist and pathologist lesions analogous to those seen in the states of human malnutrition presumably of dietary origin

---

[1] McCollum E V The Supplementary Dietary Relationships Among our Natural Foodstuffs, The Journal A M A, May 12, 1917, p 1379

[2] Hopkins, F G Jour Physiol, 1912, **44**, 425

[3] Flavors and Vitamins, Current Comment, The Journal A M A Dec. 26, 1914, p 2296, Modern Bread and Deficiency Diseases April 22, 1916 p 1314, What Is a Vitamin? editorial, Mar 6 1916, p 1470, Dietary Toxicity Versus Deficiency, Oct. 7, 1916, p 1094

In the case of maize, for example, more than a single dietary factor is at fault in determining the failure of young animals to grow on this seed When suitable inorganic salts, additional protein of an adequate sort, such as the casein of milk, and butter fat with its fat-soluble vitamin are added, successful nutrition becomes assured All of these additions, representing the remedying of three distinct defects of maize alone, are needed For wheat a similar story has been evolved, except that the special deficiencies of this seed are somewhat different from those of maize

By an appropriate selection and combination of natural foods based on a physiologic analysis in the manner briefly indicated, it has at length begun to be possible to accomplish in a somewhat scientific way the construction of dietaries in which two or more products, each inadequate by itself, may supplement each other so as to make an adequate mixture Many of our common food concoctions are in reality exemplifications of such combinations But empiricism is by no means a safe guide It is gratifying to realize that a mode of attack on the problems of suitable combinations is in sight Meanwhile we must learn to avoid too great dogmatism, the dangers of which have already been indicated in another connection in relation to questions of diet[4] As McCollum points out

> The consumption of a varied diet makes in some degree for safety but will by no means insure safety The inadequate diets of man are probably never highly satisfactory with respect to all factors but one. Rather they are in some degree unsatisfactory with respect to two or three dietary factors simultaneously, and the probability that they will be so increases greatly as the food supply tends to be limited to the seeds of plants, and such manufactured products as are derived from the endosperm of seeds The time will doubtless come within a few years when specific advice can safely be given as to the best way to plan a variety of human dietaries but a consciousness of the paucity of our knowledge concerning the peculiar supplementary relationships among our natural foodstuffs forbids more than a general statement as to the safest policy now

---

[4] Limitations of the White Bean as a Dietary Component editorial The Journal A M A June 2 1917 p 1627

War, a Traumatic Epidemic.—"War" said the Russian army surgeon Pirogoff is a traumatic epidemic. Not medicine but administration plays the leading part in the aid of the sick and wounded in the scenes of war"—Lieut.-Col C. C McCulloch Jr U S Army The Scientific and Administrative Achievement of the Medical Corps of the United States Army *The Scientific Monthly*

Current Comment

OKLAHOMA AND THE CHIROPRACTORS

Slowly but surely the public is becoming informed regarding the utter inadequacy of chiropractic, and legislatures are beginning to deal with this cult more intelligently There is no more fitting proof of this than what recently took place in Oklahoma The chiropractors had made their customary attempt to secure a legal status in that state without having to comply with the requirements of the medical practice act This bill was defeated Another bill was substituted for it, which properly placed their licensure in the hands of the state board of medical examiners The latter bill was passed in spite of a powerful lobby, who referred to the bill as "the crowning iniquity of the medical trust," "this damnable bill," "damnable crime" and other like epithets The bill had passed the senate and was being considered in the house when "Dr" Willard Carver, the leader of the chiropractors and head of a chiropractic college in Oklahoma City, made an astounding and utterly unfounded charge, that the medical profession had raised "a fund of over $674,000" to defeat chiropractic legislation in Oklahoma He thus charged, by implication at least, that the senate had been bribed The senate took prompt action by citing Carver to appear and answer contempt charges A report says that on his inability to offer proof of his statement, he was fined $500 and sentenced to serve ten days in jail These procedures are a duplicate, although somewhat more spectacular, of what has been going on in many states during the last few years, in the efforts of this ill-trained group of "healers" to obtain the right to practice medicine without first securing the education required by medical practice acts During the present sessions of the various legislatures, excepting in one state — North Carolina — their efforts have been defeated Meanwhile, Oklahoma has secured an amendment to its practice act giving the licensing board ample control of this medical cult

PRAYERS FOR PROFIT

The Christian Science Church is said to have among its followers no scientist recognized by men of science, no authority on the Bible recognized by biblical students, no man of standing in the world of philosophy, and no physician of standing among medical men — all of which may be true Anyhow, it is well known that its "healers" offer prayers at so much per, that they give "absent treatments," for which a charge is made, and that they "treat" human disorders by spiritual means — for the profit there is in it — yet Christ did not exact payment from those He healed Which, of course, is immaterial It is in keeping with the evidently commercial character of this "church" that those interested in its propagation have succeeded in securing exemption for its "healers" from the educational requirements of the medical practice acts in twenty-eight states! Ohio, however, does not seem to believe in thus commercializing religion, since in that state, in spite of a powerful lobby, the Eddyites were defeated in their efforts to secure exemption from the medical practice act They can pray for the sick all they please, they can give either present or absent treatments, but they cannot legally charge for so doing Of course this will not prevent them from continuing to reap a rich harvest without work and without expense Oh, what a joyous, carefree life is that of an Eddyite practitioner!

SHALL CIVILIAN PHYSICIANS EXAMINE RECRUITS?

The Journal has received many inquiries as to why civilian physicians cannot be authorized to examine recruits for the army, thus relieving the commissioned medical officers of an immense burden Possibly the reason may be the untrustworthiness of such examinations on account of the personal interest of or other influence brought to bear on the examiner, and especially because civilian physicians are not informed as to military requirements We are led to believe this from a communication received from a medical reserve officer, who relates his observations during the first week of his active duty in connection with a reserve officers' training camp When the young men received orders to present themselves at the training camp, they were instructed to have themselves examined by their home physician before reporting for duty, the object being to eliminate the manifestly unfit and also to save such men the time and expense of a trip to camp At the training camp from which our correspondent writes there are between 4,000 and 5,000 prospective reserve officers During the first week there were found simply among those who reported to the Medical Department for "sick call" before the regular routine examinations by medical officers were instituted, two men with exophthalmic goiter, one with a chronic heart condition not compensated, and several with acute venereal disease contracted before coming to camp One case in particular attracted attention because of the numerous defects found which would disbar the man from service The first step in the examination of recruits is to take the weight and height This man was 64½ inches tall, and weighed 104½ pounds Only the Adjutant General of the Army has the special authority to accept an applicant whose weight falls below 120 pounds Among other defects found on a cursory examination of the man mentioned were marked hammer toe of the large toe of each foot with painful bunion, hammer toe of the second and third toes of each foot so severe that the nail struck the ground, and one leg was an inch shorter than the other This the man compensated by standing in a position which gave him the appearance of marked scoliosis There was severe pyorrhea There was a distinct heart murmur, the apex beat was in the sixth interspace outside the nipple line, the heart reacted severely to the slightest excitement Finally, there were both external and internal hemorrhoids This case is an exceptionally severe one, but it is an actual case And yet this man had presented himself with a certificate of perfect health in the form of a report of an apparently rigid examination made by his family physician, had been enrolled in the training camp for a week, and his condition discovered when he reported for sick call, before the official examination had been made Medical officers are supplied with "Rules for the Examination of Recruits"[1] They should thoroughly familiarize themselves with these rules before attempting the work

THE CONTROL OF INDUSTRIAL ANTHRAX

Although the cause and mode of infection of human anthrax have long been known and energetic measures have been taken to prevent its spread in Europe, the United States only recently has awakened to the need of preventive legislation Andrews[2] states that there is one death from anthrax for every five deaths from lead poisoning in the registration area of the United States About one case of every five reported is fatal Practically all industries in which anthrax occurs are found in this country Of these the leather, wool, animal hair and bristle, horn, bone and glue industries rely in large part for animal products on portions of Russia, China and other Asiatic countries, and South America, in which sanitation is not highly developed and anthrax prevails To reduce the danger from these sources, the United States recently has forbidden the importation of products from animals infected with anthrax, and now requires disinfection of such products as may come from infected districts While this measure will reduce the danger from working with such materials, it cannot eliminate it because of the great resistance of the anthrax spore to germicides From reports of European commissions on anthrax, it appears that no certain means of destroying the spores by heat or antiseptic solutions without injuring the commercial value of the hides, wool or other material have yet been discovered The real need in America would seem to be specific regulations compelling employer and employee to take certain simple precautions in the handling of suspected materials, as the wearing of gloves and masks for those carrying hides and wool, separate working clothes for the factory, facilities for washing and bathing with hot water and soap, the disinfection of workrooms and benches, and especially the elimination of dust by exhaust systems in dusty processes, such as wool-sorting, from which the exceedingly dangerous pulmonary type of anthrax is contracted The posting of notices which would bring home to the worker the modes of infection of anthrax, the danger of infecting slight abrasions of the skin, the first symptoms of the disease (the pimple which later becomes the black centered pustule), and especially the need for early treatment by the physician, would also be of great help Arrangements should be made for the liberal use, at little or no cost to the infected worker, of antianthrax serum, which now is expensive When preventive means of definite value are so near to hand, it is a pity if life is lost because of neglect and carelessness by those who are responsible for the health and welfare of workers exposed to the dangers of anthrax

---

[1] This pamphlet, G O 66, W D *1910 and supplementary circular* No 2 will be sent by The Journal on receipt of a stamped [illegible] addressed envelope

[2] Andrews Bull 205, U S Bureau of Labor Statistics *1917*

Medical Mobilization and the War

KINSMEN, HAIL!

This poem, by one of England's poet-laureates, was written in 1894 It reads as though it were written for the present war, in any event, it is so appropriate to the day that it is worth reproducing

What is the voice I hear
On the winds of the western sea?
Sentinel, listen, from out Cape Clear,
And say what the voice may be
'Tis a proud free people calling loud
To a people proud and free

And it says to them, "Kinsmen, hail!
We severed have been too long,
Now let us have done with a wornout tale,
The tale of an ancient wrong,
And our friendship last long as love doth last,
And be stronger than death is strong"

Answer them, sons of the selfsame race,
And blood of the selfsame clan,
Let us speak to each other face to face,
And answer as man to man,
And loyally love and trust each other
As none but free men can.

Now fling them out to the breeze,
Shamrock, Thistle and Rose,
And the Star Spangled Banner unfurled with these—
A message to friends and foes
Wherever the sails of peace are seen,
And wherever the war-wind blows.

A message to bond and thrall to wake,
For wherever we come, we twain,
The throne of the tyrant shall rock and quake,
And his menace be void and vain,
For you are lords of a strong young land,
And we are lords of the main

Yes, this is the voice on the bluff March gale
We severed have been too long,
But now we have done with a wornout tale,
The tale of an ancient wrong,
And our friendship last long as love doth last,
And be stronger than death is strong
—Alfred Austin.

MEDICAL MILITARY INFORMATION FOR PHYSICIANS

The following pamphlet will be sent on receipt of 6 cents in stamps to cover cost of mailing

"The Medical Officers of the Army," by Major William N Bispham, M C., U S Army, including "The Medical Corps of the Army as a Career," by Major R C Noble, the text of the Geneva Convention, lists of literature, etc 72 pp

Any of the following mentioned pamphlets or circulars will be sent by The Journal on receipt of a stamped self-addressed envelope

1 What the Civilian Doctor Called to Active Service with the Army Should Know, by Major W J Lyster, a reprint of three articles which appeared in The Journal in 1916, giving the duties of the physician in the zone of the interior, on the line of communication, and in the zone of the advance

2 Rules for the Examination of Recruits, consisting of G O No 66 and Circular No 2, giving the regular technic of examination of recruits for the United States Army

3 Examining Boards for Applicants for the Medical Reserve Corps, a list of boards officially constituted to pass on applicants for the Medical Reserve Corps

4 Information Regarding Application for Appointment in the Medical Reserve Corps

5 Application Blanks for Appointment to the Medical Corps and to the Medical Reserve Corps

6 General Information for Officers Entering Service in the Medical Reserve Corps, Bulletin VII, Army Service Schools, 15 pp

Salary of Reserve Officers in Camp

To the Editor —Please inform me if medical officers in the Reserve Corps draw salaries when ordered to training camps.

Oliver H Griffith, M D, Parkersburg, W Va

Answer —A medical officer when ordered to active duty receives the salary of the rank in which he is commissioned

---

Examination of Recruits Under Draft

To the Editor —Will you please inform me who is going to examine the men recruited by selective draft as to their physical qualifications? Are the members of the Medical Corps the examining board or are volunteer civilian physicians to pass on the candidates?

J A Valenta, M D, Iowa City, Iowa

Answer —It is understood that the examination of recruits will be made by regularly created boards, and that these boards will be composed of Medical Reserve Officers on active duty and detailed for this purpose

---

Moving to Another Location After the War

To the Editor —If a man enters the service of the government, serves through the war and is honorably discharged when his services are no longer needed by the government, finds circumstances so changed on his return to his former location that it is not advisable for him to reopen his office there and must find a new location in some other state that does not reciprocate with his former location, will he be required to stand another examination before the State Board of Medical Examiners in the state of his choice before he will be allowed to practice medicine? In other words, will active service in the Army, Navy, Public Health Service etc, during the time of war, entitle a physician to practice medicine in any state of the Union? I am in a small town that is not large enough for two Should I enter the service and find on my return home that I have lost my practice to some 'slacker" or for other cause, and find it necessary to locate elsewhere, will my service to my government entitle me to locate in some other state without examination? No other state reciprocates with Alabama and the study necessary for me to pass an examination would be an enormous loss of time and money when most needed, makes me hesitate before giving up the practice it has taken me several years to build

S

Answer —The great sacrifice that many physicians will make when they leave their homes to go into the army work will be the possible loss of their practice—the business they have built up The organized profession in nearly every state is trying to make arrangements whereby the loss will be minimized, but undoubtedly absence for a year or two will mean the total loss of practice, if that practice was general in character, and in a locality where there are many other physicians

In regard to securing new locations This will not be difficult in many states in which reciprocity has been provided for by the Medical Practice Act, and in which the licensing board has established reciprocal relations with other states In some states—Alabama, for example—the law provides for reciprocity, but the licensing board has not established such relationships The probability is, however, that this will be established if there are many cases such as that of our correspondent from Alabama Furthermore, already the practice acts in eight states provide for the licensing of retired medical officers of the United States Army, Navy and Public Health Service without further examination and possibly this may be extended to apply to medical reserve officers who have been in active service

---

Appointment of Officers in Medical Reserve Corps

During the week ending May 26 1917, there were recommended to the adjutant-general of the army for commissions in the Medical Reserve Corps, twelve majors, seventy captains and 139 lieutenants

During the week ending June 2, 1917, there were recommended to the adjutant-general of the army for commissions in the Medical Reserve Corps, ten majors, 160 captains and 663 lieutenants

---

Orthopedic Surgeons Arrive in England

The Goldthwaite unit of orthopedic surgeons which went to England to undertake orthopedic work under the direction of Col. Robert Jones arrived safely during the week ending June 2.

Chicago Unit Reaches England

A cablegram from London announces the arrival in England of the last of the six American Red Cross units ordered abroad, namely the Chicago unit This unit is commanded by Major Christopher C Collins, with Major Frederic A. Besley as medical director Another message from Mrs Whitelaw Reid of London announces that the New York, Boston and Cleveland units have already gone to hospitals in France

What's the Matter with Pocatello?

To the Editor —Anent your current comment, The Journal May 26, "The Duty of the Medical Profession," I desire to state that when war was declared there were sixteen practicing physicians in Pocatello, Idaho Since that date one [illegible]tered the Navy Medical Corps, one has reported for [illegible] the Medical Reserve Corps, four others have already [illegible]d commissions in the same service, and two others have applied for commissions, making a total of eight out of the sixteen Is there anything wrong with Pocatello?

Francis H Poole, M D
Secretary, Pocatello Medical Society

Many Ask Exemption

In an address delivered by Major Robert E Noble, M C., U S Army, before about 1,500 physicians of New York City, at a medical reserve rally, May 28, he is reported to have said

> We have offered commissions to five thousand men One half of them have accepted Of the officers ordered to the training camp the number who have asked to be exempted is simply appalling I entreat you as citizens of this great country and as members of this noble profession to give the service we ask, in this time of crisis

Special Committee to Study Medical Conditions at the Front

Major Hugh Hampton Young M R. C, Baltimore, director of the James Buchanan Brady Institute at the Johns Hopkins Hospital, has been selected to head the special mission under the direction of Gen William C Gorgas, Washington, D C, and the Council of National Defense that is to study medical necessities at the battle front and will have entire charge of the medical care of the American Army in France. Dr Young has already started on his mission and on his arrival in England will report to Surg Gen Sir Alfred Keogh, R A M C He and his staff will also report on the advisability of establishing in this country a hospital for the care of wounded and disabled American soldiers who may have to be sent home Dr Young will be accompanied by Capt Louis C Lehr of Georgetown University, Capt Montague L Boyd of Emery College, Atlanta, and Lieut Howard L Cecil of the Brady Institute, Johns Hopkins Hospital

Staple Supplies for War Conditions

The Council of National Defense has issued under date of May 9, 1917, Part One of a series of pamphlets which will include lists of staple medical and surgical supplies selected to meet war conditions These pamphlets have been prepared by the Committee on Standardization of the Council of National Defense Part One is devoted to surgical instruments and includes a minimum number of articles The lists of surgical instruments and apparatus were selected by subcommittees appointed by the Committee on Standardization These committees were composed of medical officers of the Army, Navy, Public Health Service a l Red Cross, and civilian practitioners representing all the specialties of medicine, working in conjunction with committees of manufac-
trers of such instruments and appliances All of the instru-
s are illustrated and adequately described The book
gave him tained by addressing the Government Printing
was seve ington, D C

murmur, t
outside the aining of Volunteer Nurses' Aids
the slightest on Hospital and Medical Facilities of the
external and re on National Defense, New York, believ-
pitals will wish to train women as volun-
exceptionally se o serve in their own or other civilian
yet this man ha period of the war, has outlined stand-
rse of training These have been for-
of perfect health mittee of this committee, working in
ently rigid examin New York County Chapter of the
American Red Cross, and have the approval of the American Red Cross

It appears that a plan for the training of volunteer nurses' aids has already been worked out by the Red Cross Nursing Service, and that a course of instruction for that purpose has for some months been given in base hospitals With certain slight changes in the theory and a moderate increase in the amount of time devoted to certain practical procedures, the course appears to be a suitable one for the purpose for which it is intended

The committee recommends that the plan of training for volunteer nurses' aids now given in base hospitals under the auspices of the Red Cross Nursing Service be accepted and extended to *such other hospitals as may* be approved by the Red Cross for the purpose, and that such courses wherever given should conform substantially to this plan and be carried on under the same auspices

In view of the fact that hospitals lacking proper educational facilities and unable to offer a proper field for such training, are attempting to establish short courses of training, it is of considerable importance that such efforts should as far as possible be placed under the control of the Red Cross, which forms our national nursing service In no other way can volunteer nurses' aids be given the official recognition which will make them available for service wherever they may be most needed

The plan of training for volunteer nurses' aids in connection with base hospital units calls for a short course of theory covering fifteen periods of two hours each (thirty hours in all, for theory) followed by a course of training in practical work in hospital wards, covering twenty-four periods of three hours each (seventy-two hours in all, for practice)

It is recommended that the courses of theory and practice be carried on in the manner described above, or concurrently, where that method proves more convenient to the hospital giving the course, and that the period of practical work be increased from seventy-two hours to a maximum of 120 hours This increase seems advisable, *not in* order that the range of work for which nurses' aids should be prepared may be enlarged, but rather that more time may be given them to acquire some reasonable degree of skill and reliability *in the performance of the tasks to which they be* assigned

The adjustment of the time in which these courses may be completed should be left to the hospital selected

The general requirements laid down by the Red Cross for the training of volunteer *nurses'* aids are

(*a*) That candidates for admission to the course should not be under 23 years nor over 50 (It is recommended that they bring in addition satisfactory evidence of a good English education and of good moral character)

(*b*) That a paid instructor be appointed for this special work who shall preferably be an enrolled Red Cross nurse, selected by the superintendent of nurses, and her appointment approved by the Red Cross Nursing Service

(*c*) That the number of persons admitted to classes in theory should not exceed twenty, and that for practical work not more than ten should be admitted to any hospital at any one time for training

(*d*) That the usual uniform for volunteer aids be worn during the training, but that the insignia of the Red Cross be allowed only when on satisfactory completion of the course the aid is detailed to regular duty

(*e*) That students entering for training as volunteer nurses' aids should be enrolled by the *Red Cross Nursing Service* and that examinations be conducted and certificates awarded through that service.

(*f*) That a suitable fee be charged for the course of instruction, of which 50 cents per capita be sent to the Bureau of Nursing Service at Washington, D C

Ambulance Items

One dozen General Motor Company special war ambulances have been ordered by Lieut Austin F Riggs for the use of Ambulance Company No 13, *Stockbridge*, Mass ——Ambulance Company No 3, of the University of Chicago is said to have received instructions to mobilize at once. It is understood that the company will proceed to a point near Allentown, Pa., where it will be equipped and placed in readiness to proceed to France ——The nineteenth section of the American Field Ambulance left Paris for the front, May 17, and the second transportation section left on the following day The Chicago Traffic Club has donated an ambulance with full equipment for service in France.——Minneapolis business men have offered three motor ambulances, fully equipped to the University of Minnesota Red Cross Base Hospital——Students of the University and Bellevue Medical College, New York, have offered to furnish and equip ten ambulances to be sent with the American troops for foreign service.——Ambulances for use in France have been given by Thomas M Dickinson and Laurence H Armour of Chicago——A Red Cross Ambulance Company was organized at Butler House, Chicago, May 28——Amherst College Alumni, Chicago, have received $1 600 for an ambulance for the American ambulance field service Louis G Caldwell of the class of 1913 will drill the ambulance——The citizens of Riverside, Ill, have unanimously agreed to provide and equip an ambulance for France, instead of having a Fourth of July celebration, the ambulance will be driven by Clinton B Evans, Jr, Riverside.——The Chicago Athletic Association has donated two ambulances for use in France, one to be driven by Joe Loomis, the other by Harrison Lobdell——Mrs A. Montgomery Ward, Chicago, has given two ambulances for service in France.

Reserve Officers Ordered to Active Duty

The following officers of the Medical Reserve Corps have been ordered to active duty at the places mentioned

To Fort Meyer Lieut. John Milliken Redding Maine.

To Northeastern Department Lieut. Paul D White to report to commanding general for duty pertaining to examination and enlistment of Massachusetts General Hospital base unit.

To Fort Riley Kan Major Philip K. Gilman, San Francisco Capts. Eugene L. Opie and Harry M Moore, St. Louis Lindsay S Milne, Kansas City Mo Richard T Glyer Brooten, Minn. James W Thornton Ackley Iowa Eugene R. Lewis Dubuque Iowa William H Hargis San Antonio Texas Thomas P Doole Eagle Lake Texas Mendell A. Jones Riverside Calif Bruce Ffoulkes and Bertram F Alden San Francisco Harry T Southworth Prescott Ariz. Lieuts. William F Ball Batesville, Ark. James V Falisi Little Rock Ark. Delbert Smith, Michael J Owens and Frederick A. Hecker Kansas City Mo Walter P Glendon, Bridgeton, N J William C. Dieckman Dexter Mo Emmett F Cook St. Joseph, Mo Leo P Bell Rochester Minn. Homer Beall Malden, Mo. Warner G Workman, Tracy Minn. Theodor Bratrud, Grand Forks N D Stephen A. O'Brien Mason City Iowa Cecil G Morehouse, Waukon Iowa Frederick W Bowles Ottumwa Iowa Harry H. Robinson Rufus I Newell and William S Frost Spokane, Wash William L McClure N Yakima Wash Charles E. Eaton Seattle Karl T Brown Indianapolis John B Steele, Chattanooga Tenn Albert S Rider Flanders S D William C Smith, Ralph L. Sharkey Joseph A. Pettit and Ferdinand H. Dammasch Portland Ore. Leo W Chilton Canyon City Ore. Vestal R. Abraham Hook River Ore. Pleasant P Nesbitt, Muskogee Okla Louis A. Milne Lawton, Okla. Charles E Swezy Winnemucca Nev Frederick A Van Buren Omaha James C Tucker Long Pine Neb Willard S Howard Alliance Neb Paul R. Howard North Bend Neb Frederick Binder Corning Iowa John D Bartlett Grass Range Mont. Edwin R. Tenney Kansas City Kan Joseph D Pettet, Arcadia Kan Jarvis E Hodgson Downs, Kan John B Close, Marysville Kan Frank M Sprague, Pocatello Idaho Philip Work Pueblo Colo Charles F Stough Colorado Springs Colo Caleb W Presnall Trinidad Colo Oscar F Broman Greeley Colo W Claude Copeland Hotchkiss Colo Andrew W Smith and Joseph D Condit, Pasadena Calif Albert M Meads Berkeley Calif Edgar H Howell, Richard J Dowdall and Arthur C. Gibson San Francisco

To Fort Oglethorpe, Ga. Majors John T Burrus High Point N C. Bert Wilder Caldwell Pittsburgh Harold Dunbar Corbusier Plainfield N J Edgar S Linthicum Baltimore Capts. Howard E. Ashbury Bertram M Bernheim Eveleth W Bridgman Thomas R. Chambers and John G Murray Baltimore Elliott B Edie Connellsville Pa. Thomas M Foley Washington D C Stillwell C Burns George S Mintzer Alfred J Ostheimer and John S Rodman Philadelphia William H Thomas, Steele's Tavern Va. Lieuts. Joseph D Aronson Philadelphia William Bates Philadelphia Clarence F Bernatz, Braddock Pa James D Blevins Pittsburgh Lewis Booker New Castle, Del Guy C. Boughton Erie Pa Joseph H. Boyles, Greensboro N C Noss D Brant Crafton Pa. Samuel H Braude New Haven Conn Alfred J Buka Pittsburgh Webster Calvin Hollidaysburg Pa Charles J Cole Jr Elkins Park Pa Charles A. Coll Philadelphia Joseph H Collins Pittsburgh Carson Coover Harrisburg Pa Ralph E. Dees Greensboro N C. Thomas F Dodd, Lincolnia, Va. Ernest W Downton, Kirkwood N Y Joseph C. Edgar Oakmont Pa James Burrow Edwards Chanute Kan. Lester Efird Tampa Fla Leon Felderman Philadelphia Charles S Flagler Stroudsburg Pa. Frank Freeland Maywood N J Friend B Gilpin, Cranford N J Donald Guthrie Sayre Pa William M Hopp and Eugene H Hayward Baltimore John R Hemminger Somerset Pa Thomas B Henderson, Henderson N C. John N Henry Philadelphia George J Heuer Baltimore William W Hoggatt Bradentown Fla Russell R. Jones Edgewood Pa. Robert A. Keilty Lansdowne Pa. David D Kennedy Pittsburgh George C. Kilpatrick, Mobile Ala George M. Laws Philadelphia, Walter E Lee, Darby, Pa Horace R. Livengood, Elizabeth N J Floyd D Lohr, Derry, Pa William J McAnally Boston Gilpin M McCain New York Henry E. McClenahan Pittsburgh Thomas L. McCullough, Homewood Pa John A McKenna Lansdowne Pa Hertel P Makel, Baltimore Harrison Martland, Newark N J Jacob L. Mathesheimer, Jersey City, N J Frank V Meriwether, Gantt Ala. Floyd Miller, Ashboro N C Charles H Mitchell Trenton, N J James C Motley, Abingdon, Va John H Musser, Jr Philadelphia Bert F Ober, Latrobe, Pa Newdigate M Owensby Baltimore Frederick J Pate, Greensboro, N C Thomas C Peightal New York City Don P Peters, Baltimore Damon B Pfeiffer, Philadelphia Kenneth A Phelps, New York George M Piersol, Philadelphia Llewellyn Powell Alexandria, Va, John K. Chorlog, Madison Wis Frank E Darling, Milwaukee Curtis A Evans, Milwaukee J Gregory Hoffman, Hartford Wis Charles Wilford Hughes Winneconne Wis Paul E. M Kersten J R. Longley Fond du Lac, Wis Harry C Mix Green Bay, Wis George Senn De Pere Wis Adolph J Shimek Manitowoc, Wis Carl C Vogel, Elroy, Wis Michael R Wilkinson Oconomowoc Wis. Thomas Willett, West Allis, Wis Vincent J Irwin Jr Granby, Conn James D McCaughey, Wallingford Conn William P Boardman Boston David E Dolloff Biddeford, Me Lew B Hayden Livermore Falls Me Paul S Hill, Biddeford, Me Harrison B Webster Castine Me Roland A Behrman, Boston Nathaniel Pope Breed, Lynn Mass. Harry F Byrnes, Springfield, Mass Frederick B McAdy and Harold E. Carney Boston Arthur W Carr Bridgewater Mass. Robert C Cochrane Boston Harold E Eggers, Omaha Neb Arthur B Emmons, Dover, Mass Channing Frothingham Jr, Boston Frederick H Howard, Williamstown Mass William J McDonald Fowler Colo Daniel F Mahoney, Boston Francis R Mahoney Lowell Mass James H Means, Boston Leon S Medalia Boston John Joseph Murphy, Chicago Albert Pfeiffer, Lima O Augustus Baxter Riley Hartford Ky David D Scannell, Boston Nathan P Pulsifer Lowell Mass Austin F Riggs Stockbridge Mass. Edward B Simmons Worcester Mass. Ralph Rayburn Simmons Columbia Mo Pierre Norbert Bergeron, Philadelphia James Stevenson Allen Geneva N Y William H Baughman Conrad Berens Jr Attilio M Caccini Douglas W Cairns James L Cobb Edward M Colie Jr Edmund McC. Connoly William A. Dalton Thomas K. Davis Sumner Everingham Linwood M Gable, Joseph Girsdansky Charles Gottlieb Malcom McBurney Bruce G Phillips Daniel Poll and Hugh A. Riley New York Edmund C Boddy John R. Booth Lawrence J Nacey Edgar W Phillips and James M. Flynn Rochester N Y Henry M Feinblatt and John F Ranken Brooklyn Samuel A Munford Ithaca N Y Alfred H Parson Great Neck N Y Charles L Redfield Middletown, N Y Nathaniel P Brooks Seattle Wash Charles H Holt Pawtucket R I Ira H Noyes and Harmon P B Jorden Providence, R I Norman R. Price, Marlintown W Va. Irvin Hardy Morgantown, W Va. Capt. Beth Vincent, Boston Mont R. Reid Baltimore Edd L. Robertson Belzoni Miss. Wilton H Robinson Pittsburgh Lewis J Rosenthal Baltimore Herbert De Grove Sherman White Plains, N Y C L. Sherrill Statesville N C Harry R. Slack Jr Baltimore Marvin L. Smoot, Fayetteville N C. Caleb W Sommerville Philadelphia August A Strasser Arlington N J Maurice L. Townsend, Charlotte, N C. James W Vernon Morgantown N C. Wm L. Vroom Ridgewood N J James P Wall Jackson Miss James R Wells Stone Mountain Ga. William E. Whitson Washington, D C John E. Williams Roselle Park N J William E Wilmerding Selma, N C. Newton G Wilson Summerfield N C.

To Fort Benjamin Harrison Majors Lucius E Burch Nashville Tenn. Ernest E Irons, Chicago Harry N Torrey Grosse Point Mich Eugene H Pool New York City Udo J Wile Ann Arbor Mich Capts William F Bernart and Lewis W Bremerman, Chicago Vernon C David Evanston Ill Francis Deacon and Frank E Pierce Chicago Hugo A Freund Detroit Mich William H Honor Wyandotte, Mich. George Waters Memphis Mich. Zabdel B Adams Brookline Mass Roger Kinnicutt, Worcester Mass. Abram S Clark and Wm P J Ruddy New York City Herbert W Taylor Brattleboro Vt. Lieuts James A Britton, Chicago Andrew J Butner Harrisburg Ill. William Arthur Clark, Peter Selbie Clark, and Roy H Cox Chicago John C Dallenback Champaign, Ill George De Tarnowsky Erle F Fisher Thomas P Foley and Arthur H Geiger Chicago Ross W Griswold Litchfield Ill. James B Hastings Alton Ill Otto A Kreme Joliet Ill. William R. Larkin Lawrence H Mayers Edwin Morton Miller, George H Musselman Harry D Orr Lester J Palmer and George N Pratt Chicago Roswell T Pettit Ottawa Ills Samuel H Richman Oak Forest, Ill William R. Robison, Chicago Henry J Ullmann Highland Park, Ill. George W Woodnick Chicago Oliver O Alexander Terre Haute Ind Zera M Beaman North Manchester Ind Clinton G Beckett, Attica, Ind James Duckworth Indianapolis Ind. Baruch M. Edlavitch Ft. Wayne, Ind. Laurence E Jewett Wabash Ind. Maurice H Krebs Huntington Ind. Otho R Lynch Peru Ind. Jesse L McElroy Indianapolis Ind Edgar H Myers South Bend Ind Garland D Scott Sullivan Ind. John P Shomer Peru Ind John M Titus Hebron Ind Warren L. Babcock Detroit Mich. Adolph E. Dreyer Detroit, Mich William Curtis Gibson Suffolk, Va. Harry H. Hammel Ann Arbor Mich. Marinus L. Holm Lansing Mich. Harry M Malejan Ann Arbor, Mich. Charles H. Merrill Detroit Mich. Norman Murphy Bangor Mich Dean W Myers Ann Arbor Mich. Don H Silsby, St. Johns, Mich Charles L Washburne, Ann Arbor Mich Charles A. Bowers Cleveland Townsend H Dickinson Germantown, O Forrest M Evans Balboa Canal Zone Alfred G Farmer Athens O Michael R Haley Piqua O Burt Hibbard Lima O Elmer A. Klein Norwood O Charles H MacFarland, Jr Cleveland Orville Manley Warren O Clarence F Murbach Archbold O Joseph Placak Cleveland Goodrich B

Rhodes, Cincinnati, LeRoy B Sherry, Cleveland, Harry R Wahl, Cleveland, and Glenford Bellis, Wauwatosa, Wis

Miscellaneous Orders Capt Arthur A Finch, M R C, Astoria, Ore, to Fort Stevens First Lieut William J Topmoeller, M R C, Cincinnati, to report to Col Lansing H Beach for examination of reserve corps recruits First Lieut Charles W Woodall, M R C, Schenectady, N Y, to the Plattsburg Barracks First Lieut John C Murphy, M R C, Hinesburg, Vt, to Ft Ethan Allen First Lieut George R Harris, M R C, Pittsburgh, to Fort Niagara First Lieut Joseph V Klauder, M R C, Philadelphia, to home First Lieut J David M Roberts, M R C, New Richmond, O, to home Capt George A Evans, M R C, and First Lieut Fred D Fairchild, M R C, George K Herzog, M R C, William J Lewis, M R C, and Benjamin Jablons of M R C, San Francisco, for active duty at San Francisco

First Lieut Harry C Blair, Soldiers' Home, Washington, D C, to report by telegraph to the commanding general of the southeastern department, First Lieut George C Ruhland, Milwaukee, report by telegraph to the commanding general of the central department

---

A Special Committee Appointed to Investigate Health Conditions in the Navy

Secretary Josephus Daniels of the Navy on June 1 appointed a special committee to investigate conditions aboard naval vessels and in naval recruiting camps ashore, and to report their findings for the information of the public. The committee consists of Dr William H Welch, Baltimore, Dr Abram Flexner and Nathan Straus The committee will make a thorough investigation beginning with the hospital ship "Solace" and the Atlantic fleet

---

Tuberculosis and War

Dr Herman M Biggs of the New York State Department of Health, in the *Survey*, May 5 1917, discusses tuberculosis in France as influenced by war conditions While practically all epidemic diseases which have heretofore been scourges of armies in the field have been brought under control in the present war, tuberculosis has assumed a large part in the sanitary history of the present struggle France is the country that has been hard hit in this respect, though Biggs says that from such data as are obtainable Austria, Hungary, Russia, and perhaps to a less extent, Germany, have likewise suffered As contrasted with England with 1 death from tuberculosis per thousand, New York State with 1 5, France before the war had 3 deaths per thousand, and in many cities the rate was higher Biggs attributes this largely to the fact that even before the war France paid little systematic attention to tuberculosis It had not been recognized by the sanitary authorities, and even now is not a notifiable disease With the advent of the war and the rapid mobilization of the troops, with examinations which were not sufficiently rigid, and with the strenuous conditions imposed on troops in the field, latent or arrested tuberculosis manifested itself among the troops and by the end of December, 1915, 86,000 soldiers had been returned to their homes with active tuberculosis In February, 1917, it was estimated that 150,000 had been returned for this cause Biggs believes that in addition 3 or 4 per cent of the population who formerly lived in the departments now in German occupation have the disease, which would mean another 125,000, based on a population of 4,250,000 Half of these live back of the German lines, partly in their own homes, partly in concentration camps and partly deported into Germany, many of whom have been returned on account of illness which made them a burden to their captors Biggs says that while he was in Switzerland, of 20,000 of these people returned, 5,000 were said to have tuberculosis, though the estimated infection among those deported into Germany has been placed at 5 or 6 per cent, which Biggs believes is conservative Among the 350,000 or 400,000 French prisoners in Germany an estimate of 5 or 6 per cent of tuberculous infection has been made, although some French estimates run as high as 30 or 40 per cent Among the four million men in the active French army at present it is estimated that ½ to 1 per cent have tuberculosis It is not believed that the cases of tuberculosis among the civil population has decreased since the war, and in the remaining 30,000,000 not accounted for in the foregoing figures, on a conservative estimate, taking as a basis the prevalence of the disease before the war, there would be at least 150,000 cases, making in all about 500 000 cases, or, say, 400,000, to be extremely conservative, to be dealt with if the war were terminated at once To deal with this vast number of cases Biggs says there are at present the so-called sanitary stations with 11,000 beds, which number it is hoped to increase to 16,000 by the end of the war, and a dozen or so well equipped dispensaries There are practically no trained nurses or social service workers, but a few women are being trained in a three months' course in the Laennec Hospital Not more than a dozen physicians are said to have given any special attention to tuberculosis, few have had sanatorium experience and still fewer who are at all familiar with the tuberculosis work of others The outlook, Biggs feels, is not encouraging, though the French government has partially realized the situation and is trying to meet the problem by the organization of dispensaries in the populous regions of France

---

Senate Committee Hearing on Salvarsan Legislation

The Committee on Patents of the United States Senate gave a hearing on June 4, on the several bills now pending in Congress, looking toward the abrogation or suspension of the patients controlling the manufacture of salvarsan, or the assumption of ownership or trusteeship by the government The case against the salvarsan patents was stated by Dr George Walker, J M T Finney and Theodore C Janeway of Johns Hopkins Hospital, Baltimore, and Dr Victor C Vaughan of the University of Michigan, Ann Arbor, Mich Mr Herman Metz, New York, who has been supposed to be operating in this country under an assignment or a license from the owners of the German patents, presented his side of the case

The arguments presented in the support of legislation proposed for the purpose of procuring for the United States a sufficient supply of salvarsan at a reasonable price were in substance those with which physicians are familiar, namely, that the existing patents enable the owners to extort from the American public an unconscionable profit for an absolutely necessary drug under penalty of suffering in the present generation and in generations to come from the suffering and disability incident to syphilis It was pointed out, too, that there had at times been a grave shortage of the drug in this country and that American manufacturers who might have relieved the situation had been deterred from doing so by the fear of expensive litigation based on alleged infringement of the German patents, with the possibility of having to pay large royalties should suits of this character be determined against them

In defense of the course followed by the owners of the German patents and of his own course, Mr Metz said that the only increase in the price of salvarsan had been based on the increased cost of obtaining the supply necessary for the United States, due to disturbed labor conditions in Europe, increased cost of transportation from Germany to this country, increased insurance rates, etc There had been no increase based on the scarcity of salvarsan in America That he had stopped selling to jobbers of the drug and had sold only to physicians and hospitals, but he had done this in order to prevent the supply intended for the United States from being dissipated by exportation by jobbers to other countries He alleged that some physicians—he expressly stated that he did not claim that they were reputable physicians—had bought salvarsan as a speculation, for resale, and that the increased prices at which such resales were effected had tended to give the impression that the manufacturers and the legitimate vendors of the drug were taking advantage of the shortage to extort unjust prices Such resales had made possible the flooding of the market with supurious salvarsan by vendors

Canadian and French preparations had been available as substitutes for the trademarked salvarsan, and Schamberg's article had been on the market, so that the shortage of the preparation was apparent rather than real Metz himself had agreed not to institute suit against Schamberg for infringement of the German patent, and had as a matter of fact himself purchased from Schamberg when he had been unable to obtain the necessary supply from Germany For salvarsan obtained in Germany, Metz claimed to have paid 5 marks per ampule. This was for the unlabeled ampules To this price there should be added, to determine the cost of the drug to him, the cost of transportation from Germany, insurance, 30 per cent duty, testing of ampules for breakage in transit, losses due to breakage, labeling, packing, advertising, distribution and overhead charges He had been at some expense, too, he said, in his efforts to detect and to prevent the sale of spurious salvarsan, some of which was absolutely inert and which was liable to constitute a real danger to the patient If the finished ampule can be produced for from 50 to 60 cents each, Metz thought that the price to the jobber should be $1.50, the difference between the net cost of the finished ampule and the price to the jobber covering all overhead charges and all profit to the manufacturer The jobber ought to sell at not to exceed $2 per ampule For such salvarsan as he has bought from Schamberg, Metz has paid $1.50 per ampule at the Philadelphia office and has had the expense of labeling and of packing to pay in addition This he has sold at retail for $2.50 per ampule, and to the government at net cost, $1.50 Mr Metz has erected a laboratory in Brooklyn for the manufacture of salvarsan, which, he said, in about thirty days will be able to put on the market any quantity of salvarsan that may be needed He has offered to turn this factory over to the government, or to supply the government at cost all salvarsan necessary for the army and navy

It was developed during the course of Mr Metz' testimony that until recently his relations with the German manufacturers of salvarsan had been simply those of an exclusive distributing agent in the United States Such salvarsan as he needed for the American trade he bought and paid for, and he made his profit out of sales He was not a licensee of the German owners of the patents, nor an assignee of the American patent rights When difficulty arose in obtaining the necessary supply in America, he sought to obtain an assignment of the American patent rights, but having failed to do so he sent his brother to Germany to see what could be done. His brother was given free access to the factory and allowed to learn the method of manufacture, but when it came to bringing to the United States either an assignment of the patent rights or even a written license to manufacture he was unable to do so, because he could get no writing of any kind through the British lines On his return to the United States he executed an affidavit in which he set forth the fact that he had been permitted access to the factory and that he had been given the right to manufacture salvarsan in this country This license was not limited to the period of the war but was for all time. This was the only evidence that Metz had of his right to manufacture salvarsan and was offered in evidence. For the right to manufacture, absolutely no consideration of any kind was given, according to Metz, the German manufacturers simply being desirous that the people of the United States should have the benefit of the drug This was over a year ago There was no legal obligation on Metz part to pay royalties, and any such payment would be only because of a moral obligation. No agreement as to the amount of royalties was in force

Senator James suggested that if Metz was the donor of the license rights to manufacture and sell salvarsan in the United States because the German owners of the patents wanted the American people to have the benefit of the remedy then he was substantially merely the trustee of such rights for the public and should have no objection to the government manufacturing the drug Senator Knox suggested that if he had paid nothing for such rights as he professes to own it might be difficult to find any substantial damage to him if his rights were infringed by any one whomsoever The American Medical Association was criticized by Mr Metz for its activity against the salvarsan monopoly in the United States Senator Knox inquired whether the Association was not well within its moral obligations in such action, to which Metz assented

Mr Metz saw no objection to the United States government taking over the patents on salvarsan for the period of the war and licensing qualified persons and corporations to manufacture it on fair conditions, as proposed in the Adamson bill, recently introduced into the House of Representatives, but he objected to the propaganda that had been maintained against salvarsan alone. He conceded the right of the government to take over absolutely any patent or to abrogate it He was in sympathy, too, with legislation restricting the right to patent drugs necessary for the health of the people.

Mr Metz finally emphasized the distinction between the patents covering the manufacture of the substance known as salvarsan and the trademarked name of that substance, and the distinction was further made clear by his attorney and it was stated that however willing the owners of the salvarsan patents might be for the government to take over the patents they must insist that the product be not put out under the trademarked name except such as came from the owners of the trademark and those licensed by such owners.

The committee adjourned without taking action.

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities new hospitals, education, public health etc)

CALIFORNIA

Resolutions Regarding Phillip Mills Jones—At the forty-sixth annual meeting of the Medical Society of the State of California resolutions were adopted setting forth the loss suffered by the society in the death of its secretary, Dr Phillip Mills Jones, to whose efforts and work, more than to that of others, the sound reorganization of the society is said to have been especially due

Personal.—Dr Arthur A. O'Neill, medical superintendent of the San Francisco Isolation Hospital, has been appointed city physician to succeed Dr Nathan Rosencrantz, deceased Dr Raleigh W Burlingame has been appointed his successor——Dr Walter P Miller, Fresno, fractured his arm recently while cranking his automobile.——Dr David E Stafford, for several years physician to the coroner's office of San Francisco County, has resigned to resume the practice of medicine and has been succeeded by Dr John R Clark.

Donation of Tethelin—Dr T Brailsford Robertson, professor of biochemistry and pharmacology in the University of California has donated to the regents of the University his patents for the growth-controlling substance, tethelin, which he has succeeded in isolating from the anterior lobe of the pituitary body The proceeds which may accrue from the sale or lease of these patents are to constitute a fund which will be entitled "The University of California Foundation for International Medical Research," and which will be expended in the furtherance of medical research, preferably research in the physiology, chemistry, and pathology of growth.

COLORADO

Changes Location—Dr J Sherwood Jacoby, Platteville has been appointed surgeon in charge of the Empire Zinc Company at Gilman

Base Hospital Organized—The University Hospital, Boulder, with all its facilities and staff, is to be offered to the United States as a base hospital

Prohibits Division of Fees—A law recently enacted prohibits the division of fees by physicians, surgeons chiropractors midwives and chiropodists, or the payment of compensation by any such practitioners for the procuring of patients For so doing the law provides as a penalty a fine of from $25 to $250 or imprisonment not to exceed thirty days or both fine and imprisonment.

ILLINOIS

Inspection of Naval Training Station—On account of rumors regarding the sanitary conditions at the Naval Training Station Great Lakes, Dr Frank Billings, chairman of the Illinois State Council for Defense, made an inspection of the station May 30 He made a thorough inspection of buildings both old and new, examined the official statistics and conversed with officers and men Less than one half of 1 per cent. of the sailors that have passed through the station have been affected with meningitis and there has been no case of typhoid fever in the camp

Public Health and Welfare Association—The Illinois Public Health and Welfare Association is an outgrowth of the Better Community Conference held at the University of Illinois in June last. Its purpose is to convey a medium for stimulating and correlating the work of all agencies and individuals directly or indirectly interested in the public health and welfare, including the state department of health local health departments the tuberculosis societies charity organizations health officers and other public officials physicians engineers lawyers biologists chemists publicists, social workers and community and public health nurses The association will cooperate closely with the state department of health, in the conduct of schools for health officers.

Chicago

Addition to Post-Graduate School—The Post-Graduate Medical School plans to erect two additions to its present buildings at a cost of more than $125 000 The buildings are to be a six story addition to the present hospital and a two or three story addition to the nurses' home

Appropriation for State Hospitals—In response to an appeal from Health Commissioner Robertson, the city council finance committee has appropriated $10,000 additional to municipal hospitals for the care of sufferers from contagious diseases This appropriation is sufficient for the maintenance of the hospitals until the end of July only

Chicago Unit Leaves Germany—The Chicago unit of the American Physicians' Expedition, which has been stationed for the last year at Graudenz, left Berlin, June 2, for Christiana, on its return to America Dr Frederick Hagler, St Louis, is director of the unit The unit was financed by the German-Austro-Hungarian Relief Committee, and having finished its work, donated the remainder of its equipment, brought from the United States to the hospital at Graudenz

KENTUCKY

Infirmary for War Hospital—At the direction of the board of trustees of the Norton Memorial Infirmary, Louisville, Dr Lewis S McMurty, has tendered the government the use of the institution as a base hospital during the period of the war

MARYLAND

Alumni Meeting—At the annual meeting of the General Alumni Association of the University of Maryland, held May 31, in Baltimore Dr Albert H Carroll, Baltimore, was elected president The medical alumni officers elected were president, Dr James M H Rowland, Baltimore, vice presidents, Dr William F Lockwood Baltimore, Dr Thomas H Brayshaw, Glenburnie, Md, secretary and treasurer, Dr Edward A Leuper, recording secretary, Dr George M Settle Baltimore, and corresponding secretary, Dr Samuel J Fort, Catonsville, Md

Hygienists Meet—The annual meeting of the Maryland Society of Social Hygiene, cooperating with the Public Instruction Committee of the Medical and Chirurgical Faculty, was held in Osler Hall, Baltimore, May 29 There were two sessions one in the afternoon at which Dr Emil Novak Baltimore, presided, and the evening session, when Judge Morris A Soper presided Among the speakers was Dr William C Rucker, assistant surgeon general, United States Public Health Service, the title of whose paper was "Social Hygiene Program for the Army and Navy During the War"

MICHIGAN

Battle Creek Unit Formed—American Red Cross Ambulance Corps No 11 has been organized in Battle Creek, Mich, with Dr James T Case as captain The other officers are Drs J H Ross, Carl G Wencke, Willard N Putnam and Asa C McCurdy The organization has been designed for immediate enlistment in the United States Army Ambulance Corps Two of the male nurses who were graduated, May 29, by the Battle Creek Sanitarium Training School for Nurses have enlisted in the company Of the fifty who received diplomas at this commencement, seven were men

NEW JERSEY

State Physicians to Meet—The one hundred and fifty-first annual meeting of the Medical Society of New Jersey will be held in Atlantic City, June 11 to 13, under the presidency of Dr Philip Marvel, Atlantic City

Associated Physicians Meet—At the annual meeting of the Associated Physicians of Montclair and vicinity, May 28, the following officers were elected president, Dr Richard Cole Newton, Montclair, vice president, Dr Leslie C Love, Montclair, secretary, Dr Browne Morgan, Bloomfield, treasurer, Dr Robert F Ringland, Montclair, and historian, Dr Henry Wallace, Glen Ridge

Personal—Dr Richard E Knapp, Hackensack, while driving his automobile over a grade crossing of the New York and New Jersey Railroad, was struck by a train and seriously injured——The fiftieth anniversary of the entrance into the practice of medicine of Dr George R Kent, Newark, was celebrated, May 7, when he was the guest of honor at a dinner, given by the Practitioners' Club, at which he was presented with an illuminated autograph testimonial

NEW YORK

Special Appeal for Medical Reserve Corps—As a result of a stirring appeal by Col Theodore Roosevelt and Major Robert E Noble of the Medical Corps, U S Army, and Col T H Goodwin of the British Royal Army Medical Corps, recently made at the Yale Club, New York, 174 physicians applied for enlistment as officers in the Medical Reserve Corps

Special Arrangement for Care of Rejected Recruits—The Council on Medical Defense Committee of Kings County, N Y, has arranged to supply medical treatment for recruits rejected by Army, Navy or Marine Corps service The recruit is supplied with a blank referring him to recognized institutions and in these institutions will be given aid according to his defect so as to make him eligible for service

New York City

Supply of Salvarsan—Resolutions on the shortage of salvarsan similar to those adopted by other medical societies were recently adopted by the Public Health Committee of the New York Academy of Medicine and forwarded to Congress

Measles Epidemic—This city is experiencing an epidemic of measles The epidemic made itself felt in the week ending March 24, when the weekly total of cases reported jumped from 389 to 898 Every week, excepting one, since that time has showed over one thousand cases It is stated that the German measles are also more prevalent than usual

Spanish Physicians Hold Meeting—The Spanish-speaking physicians of New York City have formed an organization, known as the Sociedad Medica Hispano-Americana Dr Antonio M Crispin was elected temporary president and Drs Anibal Zelaya and M Uribe Troncoso were elected secretaries of the society

Paratyphoid Vaccine—The department of health announces that it is ready to supply paratyphoid vaccine, containing 500 million paratyphoid bacilli, Type A, and 500 million paratyphoid bacilli, Type B, per cubic centimeter For the present it is advised that the dose for the paratyphoid vaccines for the average adult shall be the same as that for typhoid vaccine Physicians are requested to assist the department in determining a standard dose by reporting the type of vaccine, dosage employed, and the extent, character and incidence of whatever local reaction or general reactions follow the use of the vaccine

Faculty Changes—The board of trustees of the Long Island College Hospital announce the appointment of Dr James C Egbert, director of extension teaching, Columbia University, as president of the medical college, Dr Otto von Huffman has been appointed dean, Dr Wade W Oliver, formerly of the University of Cincinnati, has been called to the chair of bacteriology, and Dr Carl H Laws, formerly of the department of pediatrics in the University of Michigan, has been appointed professor of pediatrics

Health Department Cooperates with Recruiting Officers—The health department has made arrangements with recruiting offices whereby men suffering from tuberculosis will be referred to the tuberculosis clinics of the department An invitation has also been extended to the recruiting officers who may desire to avail themselves of the services of the department clinics to have the clinics examine and observe intending recruits in order to assist in the diagnosis of questionable cases

To End Milk Charity—Mr Nathan Straus has issued a statement in which he announces his intention of giving up the park milk stations which he has been supporting He will, however, continue them during the coming summer This work has cost him more than a million dollars His reason for giving up this philanthropy, it is reported, is not alone the cost, but because of the lack of cooperation and even the hindrance he has encountered from interference on the part of the park commissioner

Court Decision Favors Health Department—The New York Disposal Corporation, which operates the garbage plant on Barren Island, was convicted in the court of special sessions, borough of Brooklyn, May 14, 1917, of a violation of the sanitary code which prohibits the escape and discharge of offensive or noisome odors from any building, vessel, or place in the city of New York, and fined $100 The action in this instance was instituted by the department of health as a result of complaints of citizens residing in the borough of Queens, supplemented by evidence obtained by inspectors of the department of health This is the first successful prosecution of the operator of the garbage plant on Barren Island

Committee on Amelioration of Hardships of the Families of Physicians Called into National Service—A joint com mittee of New York Academy of Medicine and Medical Society of the County of New York has been formed for the purpose of collecting and administering funds for the support and care of wives and families of medical men who may require financial aid as the result of the head of the family being called into the service of the country This fund was started by Dr Edwin B Cragin with $10 000 by Dr John F Erdman with $5 000 and by Dr Seth M Millican with $1,000 The officers of the joint committee are chairman, Dr Walter B James, secretary, Dr Edward L Hunt, treasurer, Dr J Bentley Squier

Personal.—Dr Alexander Lambert has accepted the position of medical adviser to the War Relief Commission of the Red Cross in France and Belgium He will leave shortly for France.——Dr Hideyo Noguchi is reported to be ill with typhoid fever——Dr Katherine Arends was seriously injured in a struggle with a burglar on the evening of May 20, and is being cared for in Mount Sinai Hospital——Dr Cornelius G Coakley was injured when a horse which he was riding fell——Dr Marcus B Heyman, who has been assistant superintendent of the State Hospital for the Insane at Central Islip, L I, has been appointed superintendent of the Hospital for the Insane on Ward s Island.——Dr Thomas Addis Emmet had the degree of Doctor of Literature conferred on him by the Catholic University in Washington, D C. As Dr Emmet, who is 89 years old was unable to go to Washington, Dr Thomas J Shahan the rector of the university, came to Dr Emmet's home in this city to confer the degree.

Conference of Charities and Corrections—The Eighth Annual New York City Conference of Charities and Corrections was held in this city May 22, 23 and 24, 1917, under the presidency of Mr Leopold Plaut The subjects considered were 'Families" "Wages 'Public and Private Relief Work," Publicity and Administrative Methods" "Education and Recreation," "Delinquency" 'Children" The meeting on public health was held in the New York Academy of Medicine under the chairmanship of Dr S Adolphus Knopf At this session Dr Josephine S Baker read a paper on "Constructive Suggestions Toward the Control of the Most Important Infectious Diseases of Child Life," and Dr Ira S Wile read a paper on 'Constructive Suggestions Toward the Control of the Most Important Infectious Diseases of Adult Life" Dr Knopf reported for the committee on Public Health of the conference and submitted a proposition that the government establish farm colonies for the men who have been rejected from military duty because of slight tuberculosis Such colonies he contended, would not only enable them to so work that they would be of service to the nation, but would so improve their physical condition that eventually they might become fit for military duty

OHIO

Personal.—Dr Henry Baldwin, Jr, has announced that he will resign as superintendent of the District Tuberculosis Hospital, Springfield to take effect, July 1——Drs James F Baldwin and Robert B Drury have been appointed members of a commission to investigate vice conditions in Columbus

Tuberculosis Institutions—An appropriation of $30 000, for the maintenance of the district tuberculosis hospital was made, May 9 at a joint meeting of the commissioners of Allen Van Wert Shelby Mercer and Auglaize counties and the trustees of the hospital——Ground has been broken for a new nurses' home and building for patients at the Warrensville Tuberculosis Sanatorium

State Society Meeting—At the seventy-second annual meeting of the Ohio State Medical Association held in Springfield May 14 to 16 under the presidency of Dr Harmon B Gibbon Tiffin the following officers were elected president, Dr James F Baldwin, Columbus delegates to the American Medical Association, Drs Alonzo B Walker Canton, Herbert C Haning Dayton, and John H J Upham Columbus, and alternates, Drs Lorenzo D Allard Portsmouth, E W Morgan Akron and Robert C M Lewis Marion The following reelections were member of committee on medical defense Dr Charles T Souther, Cincinnati and councilors second district Dr John E Hunter Greenville, fourth district Dr Charles W Moots Toledo sixth district, Dr Edgar J March, Canton eighth district, Dr Albert B Headley Cambridge, and tenth district Dr Wells Teachnor, Columbus The selection of a meeting place for 1918 was not decided

Committee on Research.—The university senate of Western Reserve University, Cleveland has voted to establish a committee on research to be affiliated with the national research board The committee is composed of Dr George N Stewart, chairman, School of Medicine, Dr Torald Sollmann, vice chairman, School of Medicine, Prof H P Cushing, secretary, Adelbert College, Prof H W Springsteen Adelbert College, Prof F H Herrick, Adelbert College, Prof O F Tower, Adelbert College, Prof H A Aikins, College for Women, and Prof Edward Spease, School of Pharmacy

Military and Naval Items—Orders have been issued to recruit the Second Ohio Field Hospital, commanded by Major Harry H Snively, and the Second Ambulance Company, commanded by Capt Dudley T Dawson, both of Columbus to a strength of 150 each——Drs Michael P Motto, Thomas E. Jones and William J Manning, Cleveland, have been appointed a board for the physical examination of applicants in the Ohio Naval Militia and the National Naval Volunteers ——The Third Motor Ambulance Company, Ohio N G, is being recruited at Cincinnati, and will be commanded by Capt James Bentley

Western Reserve University Items—John H Lowman, professor of clinical medicine and medical ethics, has been appointed a member of the advisory council of the Edward L. Trudeau foundation for research and teaching in tuberculosis——Dr L W Ladd associate professor of clinical microscopy, has been appointed visiting physician to Charity Hospital——The new building of the Dental School is nearing completion and will be occupied in the fall of 1917 The building is situated alongside the university campus and near the site for the new medical school plant The dental school, formerly affiliated, is now an integral department of the university An extensive revision of the curriculum and an increase in entrance requirements are contemplated——Dr Samuel E. Chiu, recent graduate of the school, is now director of the department of dermatology ophthalmology and Wassermann laboratory of the Eden Dispensary, F 129 Bubbling Well Rd, Shanghai, China, and reports that he is organizing a modern hospital in Shanghai with nursing and medical schools

PENNSYLVANIA

Philadelphia

Personal.—Dr Jay Schamberg addressed the graduates of the Philadelphia Polyclinic Training School of Nurses at the annual commencement held in the New Century Club May 31 ——Dr Nathaniel Ginsburg addressed the graduating class of the Jewish Hospital Nurses' Training School at the annual commencement, May 29——Dr Alonzo E. Taylor, professor of physiologic chemistry in the University Medical School, was recently called before the committee of the house to give expert testimony on the subject of food production and conservation

Alumni Meetings—The Alumni Association of the Jefferson Medical College held the annual banquet at the Bellevue-Stratford Hotel June 1 Among the speakers were the Hon William Potter president of the board of trustees, Dr Hobart A. Hare, Mr E J Cattell city statistician, and Dr George D Porter of Bridgeport, Conn The following officers were elected president Dr Chevalier Jackson, vice presidents Drs P Brooke Bland, Henry E Gaskill, E J G Beardsley and William S Higbee, recording secretary, Dr H K. Mohler, corresponding secretary, Dr E. H Funk, and treasurer Dr Warren B Davis——The Alumnae Association of the Women's Medical College of Pennsylvania held their annual business and scientific meetings at the college, June 7 and 8 The president's address was delivered by Dr Frances Van Gasken At the scientific meeting the speakers were Dr Cora Walker E Kenzie and Dr Gertrude Walker In the evening the speakers included Mr William H Slayton executive secretary of the Navy League and Dr Rosalie A. Morton On Friday at the scientific section, Dr Margaret F Butler Miss Katherine B Davis and at the afternoon session Drs Theodore LeBoutillier, Annie M Freese and Bertha M Meine spoke.

CANADA

Hospital News—Mr J L. Englehart, chairman of the Northern Railway Comission has donated $10 000 for the purpose of adding a maternity annex to the Englehart Hospital Petrolia, Ont., which was formerly his private residence.

Canadian Women's Gift for War Hospital Extension—The women of Canada raised $200 000 for a hospital ship, but decided finally to devote it to something more permanent and purpose of organizing the medical profession for war, the services of the medical organization, and give to the governmental authorities the assurance that the American Medical Association desires to cooperate in every possible way in this work of the government and with other medical organizations that have offered their services for this purpose

Address of Chairman of the House of Delegates

Dr Hubert Work, chairman, presented the following address to the House of Delegates

To the Members of the House of Delegates of the American Medical Association

The by-law creating the new office of chairman of the House of Delegates extended to him permission to make suggestions to the House in writing, at any time

I construe the functions of this office to be executive rather than suggestive, and prefer not to indicate needed legislation This will be specifically called to your attention through reports of officers soon to be read and by delegates from the floor

Cooperation between us will, however, be necessary for effective and economical use of the time allotted for your deliberations

Rules of order and procedure have heretofore been arranged and adopted, intended to admonish delegates who might become more intent on personal vantage than on the greater good to the larger numbers, and equally to restrain your speaker from arbitrary enforcement of his personal views

It is confidently expected that with this mutual understanding of a common purpose the letter of the law may never be invoked, but that its spirit will control and no one of us will forget our duty to each other immediately, to the Association we represent eventually, and to the millions of sick which 70 000 members care for ultimately

To those of you who sit in this House for the first time, perhaps I may say that its rules and mode of procedure are similar to those of other deliberative bodies of like kind

All routine and new business requiring much time for consideration is referred to committees selected from the floor who report back a digest of their findings with recommendations

It is not necessary that these committees report unanimously Some of the most effective work of this House has been accomplished on reports of minority members of committees

It is intended that the delegates in this House shall have equal opportunity to be heard, whether representing a state one or one of the delegations numerically strong, or whether a new member or one long familiar with his opportunities

The reference committees which I shall later name have been selected so far as possible from geographic location, and from those who by reason of previous service in the House have had their attention directed to the legislative needs of the Association

The setting apart of two days for uninterrupted work of the House will, I believe, promote thorough work and efficiency

Heretofore delegates were compelled to forego their section work or neglect their House duties This work of committees was done by a minority of members, with the result that the Association's legislation has been directed from necessity by its officers and chairmen of reference committees, a responsibility not courted by them nor contemplated by the constitution

The duties of these reference committees are of the utmost importance to the welfare of the Association, and I would earnestly urge that every committeeman give to this work his very best attention

Through no dereliction of our profession or of our people, our country, and we are citizen medical men, is being drawn by the logical circumstances toward conditions for which history records no parallel

The American Medical Association looks to you, gentlemen, its executive guardian and final authoritative body, to direct its officers whom you elect how to meet this national crisis as an organization

When war burst on Europe and was later threatened and declared by our own United States, the medical profession with its handmaiden, the Red Cross, was the first called of each country and the first to answer

The American Medical Association from its membership offered to the cause of humanity the best equipped medical men the world has ever known Others by the thousand are preparing to follow, many of them sacrificing incomes that seem like fortunes to some of us—duty trained professional men, not tradesmen for hire—for ours is a labor organization which has never discussed the length of working hours or a fixed compensation for service

As individuals we can cheer those who go forward and hearten those they leave behind, and help each other care for them, but what service the splendidly organized American Medical Association may render as an organization is for you to both suggest and direct

Reference Committees

At the conclusion of his address, the chairman announced the following reference committees

RULES AND ORDER OF BUSINESS

G Wythe Cook, Chairman	District of Columbia
H L Bartlett	Maine
John O Polak	New York
J W Riley	Oklahoma
J H Irwin	Montana

MEDICAL EDUCATION

William S Lalor, Chairman	New Jersey
L W Littig	Iowa
Robert E Noble	U S Army
R A Hatcher	New York
Dean Lewis	Illinois

LEGISLATION AND POLITICAL ACTION

M L Graves, Chairman	Texas
E J Goodwin	Missouri
C J Whalen	Illinois
Sol G Kahn	Utah
F W McRae	Georgia

HYGIENE AND PUBLIC HEALTH

William C Rucker, Chairman	U S Public Health Service
A T McCormack	Kentucky
John Ridlon	Illinois
LeRoy Crummer	Nebraska
E B Heckel	Pennsylvania

AMENDMENTS TO CONSTITUTION AND BY LAWS

Floyd M Crandall, Chairman	New York
C L Stevens	Pennsylvania
George A Lund, U S Navy	New York
Perry Bromberg	Tennessee
M N Voldeng	Iowa

REPORTS OF OFFICERS

H G Wetherill, Chairman	Colorado
E A Hines	South Carolina
B R McClellan	Ohio
Southgate Leigh	Virginia
A E Bulson, Jr	Indiana

CREDENTIALS

D Chester Brown, Chairman	Connecticut
F C Warnshuis	Michigan
C P Meriwether	Arkansas
H P Newman	California
C W Hannaford	New Hampshire

MISCELLANEOUS BUSINESS

J S Blake, Chairman	Massachusetts
D E McGillivray	Washington
Alexius McGlannan	Maryland
H R Ritchie	Minnesota
I LeM Hupp	West Virginia

Reports of Officers

Report of the Secretary

The Secretary presented the following report, which was referred to the Reference Committee on Reports of Officers

To the Members of the House of Delegates of the American Medical Association

TABLE—ORGANIZATION OF CONSTITUENT ASSOCIATIONS

Constituent Association of	No Counties in State	No Component Societies in State Assn	Number Counties in State Not Organized 1916	Number Counties in State Not Organized 1917	No Physicians in State (5th Ed Directory)	Number Members of State Association 1916	Number Members of State Association 1917	No A M A Fellows in State	No Subscribers to Journal in State*
Alabama	67	67			2,500	1 760	1,851	348	188
Arizona	14	12	3	2	207	147	153	124	84
Arkansas	75	62	9	13	2 637	1 091	1 103	337	104
California	59	88	20	19	5 687	2 703	2 790	1,950	835
Colorado	63	25	34	31	1 733	811	868	489	188
Connecticut	8	8			1 678	970	1 039	695	848
Delaware.	3	3			261	101	101	57	82
Dist Columbia					1 482	572	560	356	109
Florida	52	31	20	20	1,321	530	573	239	156
Georgia	152	85	56	58	3 421	1 415	1,323	508	309
Idaho	37	6	20	12	439	133	164	86	118
Illinois	102	98	1	1	10 048	5 934	6 057	3,897	2,050
Indiana	92	87	1	1	4,872	2,474	2 418	1 158	461
Iowa	99	97	2	2	3 751	2,186	2,277	1,214	458
Kansas	105	70	27	27	2 083	1 475	1 117	812	823
Kentucky	120	115	2	4	3,584	2,873	2,300	707	256
Louisiana	64	41	22	21	2 060	821	805	875	255
Maine	16	14	2	2	1,205	717	753	313	146
Maryland[1]	23	21	3	2	2,292	1,198	1,200	694	415
Massachusetts	14	18			5,869	3 620	3,593	2,155	945
Michigan	83	57	2	2	4,360	2,892	3 027	1,845	480
Minnesota	86	28	3	3	2 447	1 416	1,652	1 210	511
Mississippi	81	47	4	3	2 048	1,068	984	196	155
Missouri[1]	114	98	11	11	6 309	3 097	3,251	1 465	597
Montana	42	14	25	25	636	220	323	205	132
Nebraska	93	62	25	24	1,911	953	970	569	415
Nevada	16	3	13	13	154	40	52	51	29
New Hampshire	10	10			690	508	509	208	71
New Jersey	21	21			3,239	1 670	1 757	948	442
New Mexico	26	10	16	16	480	185	199	123	62
New York	62	59	2	1	15 670	8 191	8 512	5 075	2,268
North Carolina	100	76	12	17	2,102	1,211	1,262	899	274
North Dakota	53	14	3	2	586	351	383	282	98
Ohio	88	87	1	1	8 045	4,398	4 679	2 403	1 032
Oklahoma	77	74	3	3	2,634	1 506	1 407	612	224
Oregon	36	13	3	3	1 187	560	596	269	200
Pennsylvania[3]	67	63	4	4	11,502	6,202	6,800	3,937	1 718
Rhode Island	5	6			772	417	416	326	148
South Carolina	45	41	8	3	1,390	635	732	277	143
South Dakota	68	9	7	7	676	343	876	256	135
Tennessee	96	65	36	29	2 457	1,355	1 675	667	423
Texas	250	147	70	70	6,240	3 450	3 443	1,389	500
Utah	28	5	23	23	465	268	259	158	70
Vermont	14	11			668	384	380	157	67
Virginia[4]	100	46	61	61	2,547	1 775	1 750	672	318
Washington	39	20	18	18	1 095	825	956	523	268
West Virginia	55	30	12	12	1 729	907	703	500	207
Wisconsin	71	54			2,803	1,816	2,894	1 064	474
Wyoming	22	5	17	15	251	117	117	59	62
Canal Zone					97	61	82	22	31
Alaska								8	24
Hawaii	5				162	69	79	36	28
Porto Rico	7	2			292	115	114	85	25
Philippine Isl					735	94	101	30	63
Totals	3 025	2 085	536	571	140,5[illegible]	78,301	81 501	42 480	19 724
Fellows listed at foreign addresses Honorary and Affiliate Fellows								106	
Fellows in government services								1 424	
Number on Fellowship roll May 1 1917								44 010	
Number on mailing list of THE JOURNAL, May 1 1917									63 678

[*] Not including Fellows of American Medical Association

Note—The number of members of the different associations stated in this table is in accord with the membership of the several associations as they were reported to the Secretary on May 1 1917

The lack of an effective uniform system for reporting the membership of the state associations accounts for whatever discrepancies this table shows and detracts from the value of the statement

Component societies are those societies which compose the state association A component society may include one county or more

[1] The state of Maryland has 23 counties and the city of Baltimore Missouri has 114 counties and the city of St Louis

[2] These state associations are divided into district societies and these are listed in the table as component societies Some of these districts are smaller and some larger than the county the county lines being ignored

[3] Provision is made for the physicians in each of these counties to join the component society in an adjoining county

[4] Virginia has recently adopted the plan of organization and is now establishing component county medical societies

MEMBERSHIP

The membership of the various constituent state associations, which constitutes the membership of the Association, according to the records in the Secretary's office, May 1, 1917, was 81,501 as shown in the table on page 32

FELLOWSHIP

The Fellowship of the American Medical Association on May 1, 1916, was 43,181 During the past year, 416 Fellows have died, 1,894 have resigned, 477 have been dropped as not eligible, 672 have been dropped for nonpayment of dues and 20 have been removed from the rolls on account of being reported "not found," making a total of 3,479 names to be deducted from the Fellowship roll There have been added 4,308 names to the Fellowship roll, of which 3,066 were transferred from the subscription list The Fellowship of the American Medical Association on May 1, 1917, was 44 010, a net increase for the year of 829

This gain in the number of Fellows as in previous years, is due largely to circularizing subscribers to THE JOURNAL who were eligible, urging them to become Fellows

AD INTERIM APPOINTMENT OF COMMITTEES

On request of Dr Franklin H Martin, Member of the Advisory Committee on National Defense, and Dr F F Simpson, Chief of the Medical Section, Council on National Defense, the President appointed the following committee to outline recommendations for the best method of utilizing the facilities of the American Medical Association in preparing for war The committee, which, we are advised, has reported to the President, is as follows Arthur Dean Bevan Chairman, Illinois, Alexander Lambert, New York, and John W Kerr, U S Public Health Service.

On March 29, in view of the critical condition in the relationship of the United States with Germany, I addressed letters to both the surgeon-general of the United States Army and the surgeon-general of the United States Navy tendering the services and cooperation of my office as Secretary of the American Medical Association in any way in which the facilities of the office or of the organization might best serve the medical departments of the federal government. This action was a personal one which I felt the emergency warranted It is now reported to the House of Delegates for its official approval if the house deems such action advisable.

Other matters in which the office of the Secretary of the Association has been concerned are reported to the House of Delegates from other sources

Respectfully submitted,

ALEXANDER R. CRAIG,
Secretary

Report of Board of Trustees

Dr W T Councilman, Chairman, read the following report which was referred to the Reference Committee on Reports of Officers

To the House of Delegates of the American Medical Association

The various activities of the Association in the interest of the medical profession and of the public have been carried on in the usual successful and progressive manner These activities will be covered by the reports of the various Councils, etc we here refer only to matters which pertain strictly to the business and publications of the Association

THE JOURNAL

Following this report are tables giving details regarding the circulation of THE JOURNAL During 1916 there were issued 3 564 522 copies of THE JOURNAL making a weekly average of 67 255 copies The weekly average for 1916 was 35 copies less than for 1915 although during the past year—1916—there was an actual gain of 41 over the preceding year in the number of copies sent to Fellows and subscribers The reduction in the weekly average occured by reason of economy in exchange copies and copies sent to advertisers etc

As will be noticed in the financial report, there was an increase in subscription receipts during the year 1916 of nearly $20,000

Archives of Internal Medicine

There was a financial loss of approximately $66 00 on The Archives for the year 1916 — hardly sufficient to mention, considering the character of the journal and the number of pages of reading matter included

At the end of the year there were 2,102 names on the mailing list, including foreign exchanges, libraries, etc This indicates a net gain of 46, as compared with 1915 — 33 of which are on the foreign list There were 1,008 names added to the list in 1916 and 959 removed During the year 28,447 copies were printed — 266 less than the number printed in 1915

American Journal of Diseases of Children

There was a gain of a little over $322 on the Children's Journal in 1916

On the first of January there were 2,372 names on the mailing list, indicating a gain of 174 for the year, 22 of which are in the foreign list There were 1,347 names added to the list in 1916 and 1,173 removed There were 31,164 copies printed last year — 1,407 more than in 1915

Cooperative Medical Advertising Bureau

The Bureau is doing very satisfactorily Two new state journals were established during the year — the Rhode Island and Nebraska — both of which have joined the Bureau There is only one journal owned by a state society — that of Illinois — that does not conform to the standards of the Council on Pharmacy and Chemistry, and therefore does not receive the benefits of the Bureau's services

The net contribution the Association had to make for the Bureau for the year 1916 amounted to $222 90 This Bureau was created to be of assistance to the state society journals, and we believe it has proved to be such

Increased Cost of Paper

The principal item of expense in the publication of The Journal is that of paper This expense is equal to one third of the combined expenses Our paper contract is one that makes it possible for us to get the lowest rate the amount used is large, we deal directly with the mill, thus saving middlemen's profits, we have large storage facilities, making it possible for those furnishing the paper to vary deliveries to meet the exigencies of the mill, and the terms are cash with discount

The price of paper began to go up rapidly in the spring of last year About June and July, book paper was almost unobtainable and commanded a price three or four times what we were paying Our contract covered the year 1916, but on August 1 we accepted a proposition made by the mill to rescind that contract and to make a new one—a compromise contract we will call it—running from Aug 1, 1916, to July 31, 1917, at a price based on a rate far below the prevailing price at the time The low rate—that is, our original contract rate—prevailed for the entire year 1915, the cost of paper being approximately $116,000 In 1916 the cost of paper was approximately $134,000—an increase of about $18,000 over the preceding year We estimate that for the present year, 1917, the paper will cost about $170,000 This means an increase in 1917 over last year of $37,000, and of $54,000 over 1915 These figures are conservative, and are based on the minimum price we may hope to get. For 1918 the contract price probably will be higher than for this year—it must be kept in mind that for seven months of this year we have the compromise rate, based on the low price of the early part of 1916

Now what does this mean? Simply that last year our income was reduced by $17,000, and that this year the reduction will be some $54,000, solely on account of the increased cost of paper But this is not all, other things have gone up, such as ink, rollers, wire for stitching The Journal, linotype metal and supplies generally, not to mention labor, which is steadily going up in all divisions of the printing trade

These new conditions presented problems to your Board of Trustees that had to be met Other publishers had to meet the same conditions, some have done so by increasing the subscription price, some by decreasing the size of their publications, some by economizing on free samples etc, or by being satisfied with smaller profits And we must meet them in like manner we must either increase the annual subscription price, decrease the size of The Journal, or get along with decreased income

Increasing the subscription price cannot be thought of, neither is it necessary But the size of The Journal can be reduced without seriously lessening its value or its usefulness to its readers Elsewhere in this report we refer to the large amount of extra space required to print the section papers, necessitating the addition of many pages—from 600 to 750 a year—to accommodate this enormous amount of matter We could still further reduce the number of pages, that is, reduce the normal size, and our journal would still be so much larger than any other weekly medical journal that there would be no comparison For instance, our journal contains nearly as much reading matter as the two New York weekly medical journals combined, and the subscription price of each of these journals is the same as that of ours

We have economized in the way of sending out sample copies In 1915 over 150,000 circular letters and sample copies of The Journal were sent to physicians who were neither Fellows nor subscribers, during the past year less than one third of this number of sample copies were circulated—less than 50,000, as against 150,000 the previous year

But even with such economy, we shall find that our income will be considerably reduced, consequently we must act accordingly Our surplus income has been used for altruistic purposes—for work carried on by the Association — for instance, by the Chemical Laboratory and the Council on Pharmacy and Chemistry, by the Council on Medical Education, and by the Council on Health and Public Instruction Your Board of Trustees found it necessary to reduce the apportionments to be used by these various councils, but has endeavored to do this without seriously crippling the important work being done

Publication of Section Papers

The strenuous times through which the country is passing affects all corporations as well as individuals, and we must adjust our activities to meet the new problems as they present themselves One of these problems which has given the Board of Trustees much concern is the publication in The Journal of the large mass of material annually presented before the sections While as a whole the papers are of a high order, some are quite indifferent and would be regarded as not acceptable if offered to The Journal direct As a matter of fact, some manuscripts which have been submitted to The Journal for publication, and returned for cause other than lack of space, later have been read before one of the sections and endorsed for publication One of the functions of the executive committee of each of the sections is to pass on manuscripts read before its section and to approve or disapprove them for publication The by-law provides that "no paper shall be published as having been read before a section unless it has received the approval and the endorsement of each member of the executive committee of the section before which it was read" But the trouble is, this law has become merely a form For instance, with one exception all the papers read in the various sections in 1915 were endorsed for publication by all three members of the executive committees, and last year all except two were approved Naturally, this might be expected, individuals hesitate to assume the odium of disapproving a paper In any event, the signing of the approval slips is simply a matter of form

The number of papers, however, which can be classed as inferior, and which should be refused publication for this reason alone, is comparatively small The more difficult problem is presented in the publication of section papers that are too technical and too special for a journal of general circulation, such as ours This difficulty is the more pronounced because of the large and increasing number of such papers There are not many of the section papers that are out of place in The Journal because of being ultratechnical, the real problem is in connection with the highly special papers—for instance, those read in the Section on Ophthalmology and in that on Laryngology, Otology and Rhinology Few of the papers presented in the latter section appeal to the general practitioner, and still fewer of those in the Section on Ophthalmology One of the common criticisms received at The Journal Office during the time the special papers are being published is that too much space is devoted to the publication of these special articles It was for this reason—that is, to avoid criticism—that in 1912 and 1913 the papers of these sections were printed together as a supplement to The Journal. However, there was so much protest on the part of some members of the two sections that this method of publishing the papers was given up The protests were to the effect that the supplement containing these papers would be thrown aside unread by the average reader

Still more serious, however, than the character and quality of the papers in the various sections is the number presented and the space required for their publication with the discussions The publication of the papers presented at the Atlantic City session in 1914 required 1,065 pages, those presented at San Francisco in 1915 required only 815 pages (there was a small attendance at this session, two sections held no meetings, and nearly all the others had much shorter programs than usual, further, one day was given up entirely to other than section work), and those presented at Detroit last year occupied 1,025 pages It may be of interest to note that the section papers occupy nearly as much space in The Journal as is devoted to original papers in any of the other American medical weeklies for the whole year

The publication of such a mass of material naturally takes time. It is never possible to complete its publication within six months, and it is often the end of January before all the matter is printed This year it was March 10 This delayed publication is unfair to those whose papers are held back, they have just cause for complaint, and they do complain It is certainly not fair to the reader, and is an injury to The Journal to be printing papers that were read from five to eight months previously In addition to all this is the fact that The Journal is prevented from publishing papers that are of practical and timely importance. The large circulation and its prestige make The Journal a valued and desired medium of publication As a consequence, at all times many more acceptable papers are offered than there is room for, and when the section papers are in process of publication this condition of affairs of course, is worse. Hence, during these months The Journal is compelled to return excellent, practical, timely papers—papers that it should publish, and papers that often are of far more practical value to the reader than some of the section papers which are displacing them

A still further handicap is the fact that when papers are continually returned with the hackneyed "on account of lack of space' many men get the idea that there never is any space and many hesitate to submit a second paper when one has been returned. Still others regard the action as personal offense

These are, in brief the conditions that have formed a problem which your Board of Trustees has been trying to solve for many years As may be remembered, on many occasions the board in its report to the House has referred to this matter Each year the board has hesitated to take any action that might appear radical hoping that in time it would be appreciated that even for the good of our annual meetings there is too much time devoted to the reading of papers and to the discussions and that these would be reduced either by having fewer sections or by having the sections occupy less time which would mean that fewer papers would be read

This year however conditions have developed which compel the Board of Trustees to take action At the prevailing price of paper it is not possible with financial safety, to publish all this material It has been the custom during the fall and winter months or until the publication of the section papers was completed to add sixteen, thirty-two or sometimes forty-eight pages to The Journal each week solely to get these papers out of the way within a fairly reasonable time This year we economized on account of the high price of paper, but even so 200 pages were added, and in spite of this, as stated above, the publication of the papers was not completed until March 10

To continue to add extra pages with paper at its present price is financially impossible The Board of Trustees at its meeting in February passed the following resolution

> "That all papers read a the annual session be treated as volunteer papers and that the same be published in full in The Journal or rejected, or published in abstract as may seem best."

It is understood that the Publication Committee and the Editor will accept no more papers than can be published within a reasonable length of time—say, by November 15, that such papers as are accepted for publication in full will appear as in the past with the discussions following, and that other approved papers will be published in abstract form with abstract of the discussions following Those who desire to publish their papers elsewhere than in The Journal will have the privilege of doing so, as in the past When a paper is published in abstract and not printed elsewhere in full, reprints of the complete paper will be available to those desiring a copy All papers are put into type in full for use in the Transactions of the various sections Reprints can therefore be made from the Transactions on those papers of which abstracts only are published in The Journal.

As a solution of the problem connected with the publication of the special papers—that is, those presented in the Section on Ophthalmology and in the Section on Laryngology, Otology and Rhinology, it was tentatively decided to establish a journal on Ophthalmology and Oto-Laryngology to be published monthly The final decision as to this and the details were referred to a special committee to report at our meeting at this session

Naturally, of course, such a journal would publish all the papers and discussions on these subjects that were regarded by the editors of the proposed journal as of sufficient value to publish, and if they were not of sufficient value to publish in that journal they should not be published in The Journal of the American Medical Association If The Journal does not have to publish the papers read in these two sections, the pressure on its columns will be greatly relieved We estimate that the publication of the papers and discussions in these two sections requires more than one sixth of the space required for the transactions of all the sections Last year, for instance, it took ninety-six pages to publish the transactions of the Section on Ophthalmology and eighty-nine for those of the Section on Laryngology, Otology and Rhinology, or a total of 185 pages This is nearly 20 per cent. of the total number of pages required to publish all the transactions

Two years ago some of the leading laryngologists of the country requested the Association to publish a journal devoted to their specialty, but at that time no final action was taken It is quite possible that later on it will be found more satisfactory to publish two journals—one devoted to ophthalmology and one to laryngology and otology In any event, whatever is published will be of a high character and will be a credit to the specialists that are represented

The only other organization comparable with ours is the British Medical Association Its journal completes the publication of its section proceedings in six to eight weeks at the outside. This for two reasons first, they do not have one-fourth the number of papers we have and second, only comparatively few of these papers are published in full, the others appearing in abstract form Still further, they have no stenographers to take down the discussions each speaker writing out his own This makes for much less but more important, discussions We do not think it necessary or advisable to go to the extent to which the British journal goes

For several years the Association has enjoyed not only uninterrupted prosperity in so far as its material assets are concerned but also continuous success in its scientific and altruistic work In its altruistic work it has at all times uncompromisingly hewn to the line It was inevitable that its exposures of the worthless and fraudulent preparations and devices with which the sick and credulous have been and still are exploited by venal interests would sooner or later be assailed by the interests affected While we have been threatened with suits many times, and while a number of suits have been filed against us for making these exposures, with one exception all have ended in threats

As is well known, the Association last year had to defend itself in what proved to be one of the longest — it lasted thirteen weeks — and hardest fought cases in the annals of litigation in this country The Association has every reason to feel that the result of this trial was satisfactory, not only from the moral standpoint, but also in its financial aspects The unselfish and cordial spirit in which so many busy and eminent men gave freely of their time, knowledge and energy in support of a simple principle and for the public interest was most gratifying The Trustees take this opportunity to express the thanks of the Association to each and all of these self-sacrificing men for the great service rendered The monetary power of the interests pitted against the Association was used to the fullest advantage, and it would seem that no efforts were spared to put the Association to every expense and annoyance possible The resulting cost of the trial is reflected in the Auditors' Report, which shows an operating loss for the year for the first time in twenty-five years Notwithstanding this unusual expense, the Association, as is also shown by the Auditors' Report, is in an excellent financial condition, and by good management in THE JOURNAL office it was possible to take care of this expense largely out of the receipts without impairing the reserve fund The good which was accomplished by this suit amply repays the cost, and will survive when the troubles and trials incident to it are long forgotten

This trial demonstrated the wisdom of having a large reserve fund on which to fall back, for the existence of this fund gave courage to carry on a vigorous defense to a successful end This leads us to suggest that the reserve fund should be still further increased In times of adversity the absence of such a fund might badly cripple us or force us to suspend temporarily all altruistic work Not all years are "fat" with prosperity, "lean" years are bound to come, against which provision must be made No one can foretell the end of the critical period upon which this country has entered, but it is easy to foresee the possibility of a diminished income to the Association It is quite possible that a large number — perhaps several thousand — of our Fellows will be called to the front for an indefinite period, during which time it is more than likely that there will be a considerable falling off in the subscriptions to THE JOURNAL. Hence it behooves us to husband our resources that there may be no interruption in our more desirable and important activities

DEATH OF DR. JONES

The medical profession, and the Board of Trustees especially, met with a great loss in the death of Dr Philip Mills Jones of San Francisco, which occurred, Nov 27, 1916 He was present at the meeting of the Board of Trustees held on November 3, and was in his usual good health Within three weeks he was dead from pneumonia It was a singular and sad coincidence that he and his wife died of the same disease within twenty-four hours For many years Dr Jones had been a power for good in the profession He had been secretary of the Medical Society of the State of California for fifteen years, and a trustee of the American Medical Association since 1908 He was always active and efficient Organized medicine has lost an asset that it will be hard to replace Dr Jones had a judicial mind and the legal phase of all medical propositions at once appealed to him He was so interested that he studied law and last year was admitted to the California Bar He died in the midst of his activity and usefulness, and your Board of Trustees mourns the loss of a most charming companion and an unusually versatile and useful member

All of which is respectfully submitted

W T COUNCILMAN, Chairman,
M L HARRIS, Secretary,
THOMAS MCDAVITT,
PHILIP MARVEL,
W T SARLES,
A R MITCHELL,
E J MCKNIGHT,
OSCAR DOWLING

Addenda to Trustees' Report

SUBSCRIPTION DEPARTMENT

The regular weekly issue of THE JOURNAL of the American Medical Association from Jan 1 1916, to Dec. 31, 1916 inclusive (fifty-three issues), was as follows

January 1	72 300		July 1	65,674	
January 8	69,095		July 8	65,621	
January 15	68 830		July 15	67,363	
January 22	67 900		July 22	65,402	
January 29	66,600		July 29	65,141	
		344,725			329,201
February 5	66,232		August 5	65,376	
February 12	66,402		August 12	65,207	
February 19	66,234		August 19	66,088	
February 26	66,816		August 26	65,369	
		265 684			262 040
March 4	66,755		September 2	65,620	
March 11	66 324		September 9	65,857	
March 18	66 028		September 16	69,078	
March 25	66,668		September 23	68,733	
			September 30	68,919	
		265,775			338 207
April 1	66,260		October 7	68,999	
April 8	66,283		October 14	68 619	
April 15	66,022		October 21	68,703	
April 22	66,202		October 28	68,483	
April 29	66,530				
		331 297			274,804
May 6	72,992		November 4	66 795	
May 13	66,833		November 11	67,262	
May 20	66,602		November 18	68 481	
May 27	65,637		November 25	68,722	
		272,064			271,280
June 3	65,991		December 2	68,818	
June 10	66 310		December 9	69 270	
June 17	65,535		December 16	70 380	
June 24	65,780		December 23	70,003	
			December 30	67,358	
		263,616			345 829
Total					3,564 522
Weekly average					67,255

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

This table gives the number of physicians (based on the fifth edition of the American Medical Directory) in the United States, the number receiving THE JOURNAL and the approximate percentage in each state The copies going to physicians in the United States Army, in the United States Navy, in the Public Health Service, etc, are not included The percentages last year were based on the fourth edition of the Directory

State	Physicians n State 5th A M Dir	Number Receiving JOURNAL	Approx per cent 5th A M Dir
Alabama	2,569	588	23
Arizona	307	208	64
Arkansas	2,637	526	20
California	5,687	2,869	50
Colorado	1,733	715	41
Connecticut	1,678	1,060	63
Delaware	261	95	37
District of Columbia	1,482	589	40
Florida	1,321	400	30
Georgia	3,421	923	27
Idaho	439	213	48
Illinois	10,648	5,965	56
Indiana	4 872	1,683	34
Iowa	3,751	1,750	44
Kansas	2,683	1,202	45
Kentucky	3,584	1 047	29
Louisiana	2,060	643	31
Maine	1,205	485	40
Maryland	2,292	1 114	49
Massachusetts	5,869	3 180	54
Michigan	4,360	2 348	54
Minnesota	2,447	1,722	70
Mississippi	2,048	376	18
Missouri	6,399	2 200	34
Montana	636	348	51
Nebraska	1,911	850	45
Nevada	154	89	58
New Hampshire	690	398	58
New Jersey	3,239	1,422	44
New Mexico	430	209	48
New York	15 670	7 277	46
North Carolina	2,102	694	33
North Dakota	586	367	63
Ohio	8,045	3 366	42
Oklahoma	2,634	924	35
Oregon	1,187	527	44
Pennsylvania	11,502	5,526	48
Rhode Island	772	484	62
South Carolina	1 399	438	31
South Dakota	676	401	60
Tennessee	3,457	1 243	36
Texas	6,240	1,996	32
Utah	465	227	50
Vermont	668	238	36
Virginia	2 547	898	35
Washington	1,695	818	48
West Virginia	1 729	749	43
Wisconsin	2,803	1 556	55
Wyoming	251	115	46

This table shows the number of Fellows and Subscribers for each year, commencing with 1900

Year	Fellows	Subscribers
January 1, 1900	8,445	4,633
January 1 1901	9,841	8 339
January 1 1902	11 107	10 795
January 1 1903	12,553	12,378
January 1, 1904	13 899	14 674
January 1 1905	17,570	15 698
January 1 1906	20 826	17 669
January 1 1907	26,255	20 166
January 1 1908	29,382	20 880
January 1 1909	31,999	18 983
January 1 1910	33 032	19 822
January 1 1911	33,540	20 504
January 1 1912	33,250	21 620
January 1 1913	36 082	19 863
January 1 1914	39 518	19 751
January 1 1915	41,254	20 430
January 1 1916	41 938	22 921
January 1 1917	42 744	22 156

The above figures include only those Fellows of the Association who are receiving THE JOURNAL of the American Medical Association It does not include those who hold their Fellowship as commissioned medical officers in one of the three government services, honorary Fellows nor those Fellows who have substituted *The Archives* or the *Children's Journal* for THE JOURNAL of the American Medical Association

During the year 1916 there were 3,079 names transferred from the subscription list to the Fellowship roll

TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the year ended December 31, 1916

ASSOCIATION RESERVE FUND

Reserve Fund as at December 31, 1915		$124,000 46
Receipts for the year ended December 31 1916		
Interest		5 351 89
		$129 412 35
Disbursements for the year ended December 31 1916		
Transferred to General Working Fund		8 763 40
Reserve Fund as at December 31, 1916		$120 648 95

TREASURER'S GENERAL ACCOUNT

Balance as at December 31 1915		$ 28 308 41
Receipts for the year ended December 31 1916		
Interest on Certificate of Deposit	$341 66	
Interest on Bank Balances	90 05	
		431 71
		$ 28 740 12
Disbursements for the year ended December 31 1916		
Transferred to General Working Fund		28 736 60
Balance as at December 31, 1916		$ 3 52

DAVIS MEMORIAL FUND

Balance as at December 31 1915	$ 3 339 79
Interest received for the year ended December 31, 1916	100 92
Balance as at December 31 1916	$ 3 440 71

AUDITORS' REPORT

Chicago, Ill., Jan. 18, 1917

To the Board of Trustees of the
American Medical Association Chicago, Ill
Gentlemen

In accordance with your instructions, we have audited the accounts of the American Medical Association for the year ended Dec 31, 1916, and now submit our report thereon

SURPLUS ACCOUNT

The surplus at the beginning of the year amounted to $418 027.54 and the surplus at the end of the year amounted to $382 135 69 a decrease of $35 891 85 which is accounted for as follows

Net Loss on Operations	$ 44 655 25
Less Transfer from Reserve Fund	8 763 40
Net Decrease in Surplus	$ 35 891 85

The net decrease in surplus is spread over the assets and liabilities as follows

Decrease in Assets		
Property and Equipment		$ 11 504 45
Certificates of Deposit		20 000 00
Current and Working Assets		24 978 77
		$ 56 483 22
Less		
Increase in Prepaid Expenses	$ 1,505 24	
Decrease in Liabilities		
Accounts Payable	18 896 58	
Advance Payment on Publications	189 55	20,591 37
Net Decrease in Surplus, as above		$ 35 891 85

FINANCIAL POSITION

The financial position of the Association as at Dec 31, 1916, is shown in the following statement

Balance Sheet as at December 31, 1916

Assets			
Property and Equipment at Cost less Depreciation			
Real Estate and Buildings			$244 701 42
Machinery			36 920 30
Type and Metals			8 215 56
Furniture and Fixtures			13 021 55
Chemical Laboratory			1 724 22
Library			1 597 55
			$306 180 60
Reserve Fund Investment			120 648.95
Current and Working Assets			
Inventory of Materials Supplies and Work in Process		$31,219 86	
Accounts Receivable			
Advertising	$25 048 56		
Reprints	1 610 09		
Miscellaneous	2,523 26		
Cooperative Medical Advertising Bureau	3 569 40		
Directory, 5th Edition (Estimated)	3 000 00		
		35 751 31	
Notes Receivable		324 37	
Directory, 6th Edition (Labor and Material)		5 981 04	
Cash in Bank and on Hand		7 843 08	
Office Fund		50 00	81 169 66
Liability Insurance Fund in Bank			4 017 93
Prepaid Insurance			1 579 39
Prepaid Expenses Session 1917			154 75
Total			$513,751 28
Liabilities			
Accounts Payable			
Cooperative Medical Advertising Bureau			$ 2 684 59
Sundry			31 11
			$ 2 715 70
Advance Payment on Publications			4,233 01
Association Reserve Fund			120 648 95
Liability Insurance Reserve			4 017 93
Surplus			382 135 69
Total			$513 751 28

The balance sheet submitted, in our opinion, correctly reflects the financial position of the Association as at December 31 1916 subject to provision for accrued interest, taxes and Journal" subscriptions paid in advance, less subscriptions and memberships due and unpaid

The securities representing the investment of the Association Reserve Fund were produced for our inspection and we found them in order

We verified the cash on hand by actual count and the cash in bank by certificates obtained from the various depositories The following is a statement of the cash balances, exclusive of the insurance cash fund

Continental and Commercial National Bank	$ 7 318 56
First Trust and Savings Bank (Treasurer's Account)	3 52
Cash on Hand	521 00
Cash Fund	50 00
Total	$ 7 893 03

OPERATIONS

The operations of the Association for the Year ended December 31, 1916, are shown in the following statements

Income and Profit and Loss Account for the Year ended December 31 1916

JOURNAL	
Income	
Fellowship Dues	$ 43 797 75
Subscriptions	274 594 74
Advertising	229 175 38
Jobbing	3 870 14
Books	6 741 96

TABLE 1—NUMBER AND CHARACTER OF PAMPHLETS PRINTED AND DISTRIBUTED, MAY 16, 1916, TO MAY 1 1917

Defense of Research, Pamphlet IX "The Fruits of Medical Research with the Aid of Anesthesia and Asepticism"		1,000
Defense of Research, Pamphlet XVIII "Obstetrics and Animal Experimentation"		1,000
Conservation of Vision, Pamphlet I "Schoolchildren's Eyes"		1,000
Conservation of Vision Pamphlet II "Industrial and Household Accidents to the Eye"		1,000
Conservation of Vision, Pamphlet IV "The Relation of Illumination to Visual Efficiency"		1,000
Conservation of Vision, Pamphlet X "Care of the Eyes"		1,000
Conservation of Vision, Pamphlet XI "Infant Blindness, or Ophthalmia Neonatorum"		1,000
Conservation of Vision Pamphlet XIV "Visual Requirements of Transportation Employees"		1,000
Conservation of Vision, Pamphlet XV "Ocular Hygiene in Schools"		2,000
Conservation of Vision, Pamphlet XVIII "Preparations for the Oncoming of Blindness"		1,000
Conservation of Vision, Pamphlet XIX "What to Do for Blind Children"		1,000
Conservation of Vision, Pamphlet XX "Blindness from Wood Alcohol"		1,000
Prevention of Cancer, Pamphlet I "What Every One Should Know About Cancer"		1,000
Prevention of Cancer, Pamphlet V "Cancer of the Breast"		1,000
Prevention of Cancer, Pamphlet IX "What Every One Should Know About Cancer of the Stomach"		1,000
Sex Hygiene "Life Problems"		1,000
Public Health "Baby Welfare"		5,200
Public Health "Hookworm"		1,200
Public Health "House Fly"		5,300
Public Health "Measles"		8,300
Public Health "Pure Water"		1,000
Public Health "Scarlet Fever"		10 000
Public Health "Smallpox"		8,200
Public Health "Tuberculosis"		4,200
Public Health "Typhoid Fever"		3,200
"What You Should Know About Tuberculosis"		203,100
"Save the Babies"		302,500
"Summer Care of the Baby"		67,000
"Baby Health Conferences"		5 000
Social Insurance Pamphlet I "Workmen's Compensation Laws"		1,000
Social Insurance, Pamphlet II "Social Insurance, the Report of the Special Committee of the American Medical Association for 1916"		2,000
Social Insurance, Pamphlet III "Health Insurance in Relation to the Public Dispensary"		3,000
Social Insurance Pamphlet IV "Health Insurance in Relation to Public Health"		2 000
Social Insurance, Pamphlet V "Social Insurance"		1,000
Social Insurance, Pamphlet VI "Medical Organization Under Health Insurance"		1,000
Social Insurance, Pamphlet VII "Statistics Regarding the Medical Profession Compiled by the Committee on Social Insurance"		1 000
"Health Essentials for Rural School Children"		55,000
"Our Progress in Medicine"		200
"Public Health Measures in Relation to Venereal Diseases"		3,000
"An Outline for a Study Course on Public Health Prepared for the Use of Women's Clubs"		12 000
"Speakers' Announcement"		15,000
Total		737,400
Score Cards	40,000	
Record Sheets	5 000	
Anthropometric Tables	5,000	
Total		50,000
Grand total		787,400

In addition a series of exhibit charts on baby welfare have been printed as follows

Baby Welfare Chart No I Birth Registration	1,000	
Baby Welfare Chart No II Care Before Birth	1 000	
Baby Welfare Chart No III Nursing the Baby	1,000	
Baby Welfare Chart No IV What Mother's Milk Did for this Baby	1,000	
Baby Welfare Chart No V Colds and Pneumonia	1,000	
Baby Welfare Chart No VI One Death in Five	1,000	
Baby Welfare Chart No VII Give Us Our Rights	1,000	
Baby Welfare Chart No VIII Don'ts for Mothers	1 000	
Baby Welfare Chart No IX. Don'ts for Mothers	1,000	
Baby Welfare Chart No X This Baby Is Happy and Thrives	1,000	
Baby Welfare Chart No XI This Baby Frets and Is Uncomfortable	1,000	
Baby Welfare Chart No XII The Difference	1,000	
Baby Welfare Chart No XIII One of Baby's Worst Enemies	1,000	
Baby Welfare Chart No XIV Three Things Are Necessary	1,000	
Baby Welfare Chart No XV Every Day in the Life of This Baby	1,000	
Total		15,000

CONFERENCE ON CHILD WELFARE

In accordance with the instructions of the Council, the secretary sent out a call for a conference at the headquarters of the Association, Wednesday, Oct 18, 1916, at which were invited the executive officers of all national organizations interested in child welfare. Those present included

United States Public Health Service, Dr W H Frost

Children's Bureau, Miss Julia Lathrop and Dr Grace L Meigs

Association for the Study and Prevention of Infant Mortality Miss Harriet L Leete, Mr Albert Cross Dr S H Hamill, Dr Philip Van Ingen and Miss Gertrude B Knipp

American Public Health Association, Dr W A Evans and Dr Lyman A Jones

Elizabeth McCormick Memorial Fund, Mrs Dunlap Smith and Mr Sherman C Kingsley

General Federation of Women's Clubs, Mrs F D Everett

American Hospital Association, Dr John A Hornsby

Council on Health and Public Instruction of the American Medical Association, Dr Frank Billings, Dr H M Bracken, Dr Lenna L. Meanes, Dr Velura E. Powell and Dr Frederick R Green

The purpose of the conference was to bring together and coordinate the work being done in the public health field by the various organizations interested in child welfare, in the hope of developing a common program that could be adopted by all the organizations interested The three propositions put before the conference were

1 Are there any factors that are of fundamental importance in the development of a program on child welfare, and if so, what are they?

2 Can a plan of campaign be outlined by which the activities of those interested can be united in securing these essentials? If so, what should such a program be?

3 If such a program can be outlined, what part will each organization take in carrying it out?

After lengthy discussion of these questions, the conference appointed a committee on coordination and program to formulate a plan for cooperation between the various organizations interested The following committee was appointed Miss Julia Lathrop, Mr Sherman C. Kingsley, Dr Philip Van Ingen, Dr J W Kerr, Dr Lenna L. Meanes and Dr Frederick R Green This committee has been in correspondence since the conference, and will hold a meeting for further consideration of this subject during the time of the New York session

CHILD WELFARE POSTERS

One of the most important developments of this conference was the practical cooperation of the General Federation of Women's Clubs, the American Association for the Study and Prevention of Infant Mortality, the federal Children's Bureau and the Council on Health and Public Instruction of the American Medical Association in preparing suitable educational material for use during Baby Week, which was observed this year the first week in May Through the cooperation of the National Association for the Study and Prevention of Infant Mortality and the federal Children's Bureau, a series of fifteen educational posters was prepared, five by the bureau and ten by the Association These were printed for the Council on the American Medical Association press, furnishing a set of educational charts which have proved extremely valuable, as, at the time that these were prepared, there was no suitable material obtainable for this purpose In addition to supplying these charts, pamphlets, score cards, record sheets and other material have been printed and furnished in large quantities to the various organizations interested in educating the public in child welfare

EDUCATIONAL CHARTS ON SCHOOL HYGIENE

The Joint Committee on Health Problems in Education representing the American Medical Association and the National Education Association, has prepared a series of fifty-five charts suitable for use in exhibits, normal schools state conferences on education and other occasions, and covering almost every phase of school hygiene Reduced copies of these charts have been printed in pamphlet form and distributed in a small edition The charts themselves will be reproduced and made available for educational or philanthropic organizations or institutions desiring material of this sort

It becomes more and more evident that the real function of the Council is not so much the direct education of the public through its own efforts such a task being far too great for the resources at our command, but rather the production of authoritative material and the giving of its approval to educational material and methods which can be carried on by other organizations and through various agencies

COMMUNICATION FROM THE NATIONAL W C T U

At the Detroit session the following letter was presented by the secretary of the Association to the House of Delegates and was by that body referred to the Council on Health and Public Instruction

To the House of Delegates of the American Medical Association Detroit Michigan

Dear Sirs —In view of the increasing desire on the part of the nations of the world for relief from the evil effects of alcoholic liquors on society and in view of the fact that all the warring nations of Europe have found that liquor drinking must be curbed because of its interference with health efficiency and safety, we, representing 400 000 women members of the National Women s Christian Temperance Union respectfully request that your honorable body give expression at this annual meeting of the American Medical Association to such a warning against alcoholic liquors as shall strengthen the hands of boards of health and temperance organizations now combating the liquor evil

One of the chief causes of the alcohol habit is the ignorance of the mass of the people concerning the real nature of alcohol They have been taught that alcoholic liquors give health and strength, that they are tonic and remedial The brewing and whisky trades advertise that their products are foods and tonics and aids to digestion and that they are endorsed and recommended by physicians the world over The medical profession owes it to itself and to the public to offset this dangerous and misleading advertising by a statement of the truth

The medical society of Russia at its meeting in 1915 issued a notable document against alcohol a copy of which is appended for the information of any of your honorable body who may not have seen it Your petitioners hope for as strong and helpful an expression from the great American Medical Association as that emanating from your Russian confrères

Yours sincerely,
Anna A Gordon President
Martha M Allen Supt. Dept. of Medical Temperance.

The Council has given careful consideration to this communication, and will present to the House of Delegates in connection with its report resolutions for its consideration

MIDWINTER CONFERENCE

The regular Midwinter Conference was held, Feb 5 and 6, 1917 in conjunction with the Council on Medical Education the Federation of State Examining and Licensing Boards and the Association of American Medical Colleges The second day of the conference was devoted to a discussion of public health instruction in medical colleges in the morning and the state regulation of the practice of medicine in the afternoon The following program was presented

State Health Instruction in Medical Colleges Morning Session
10 o Clock Florentine Room Congress Hotel

Opening of the Conference Dr Frank Billings, Chairman of the Council on Health and Public Instruction, Chicago

Public Health Training in Medical Colleges Dr George E Vincent Minneapolis President University of Minnesota, and President Elect Rockefeller Foundation

Public Health Instruction in Medical Schools Dr Milton J Rosenau Boston Professor of Preventive Medicine and Hygiene, Harvard Medical School

Discussion opened by Dr Victor C Vaughan Ann Arbor Mich Dean of the University of Michigan Medical School Dr S J Crumbine Topeka Secretary Kansas State Board of Health, and Dean of the University of Kansas School of Medicine.

State Regulation of the Practice of Medicine Afternoon Session
2 o Clock Florentine Room, Congress Hotel

The State Regulation of the Practice of Medicine as an Executive Problem Hon James M Cox, Columbus Governor of Ohio

Discussion opened by Dr C St Clair Drake Springfield Secretary of the Illinois State Board of Health Dr David A Strickler Denver Secretary Colorado State Board of Medical Examiners Dr William P Best Indianapolis Secretary of the National Eclectic Medical Association

SPECIAL ACTIVITIES

Owing to the fact that the annual session this year is held in New York and that much of the public interest is unavoidably diverted by the war and kindred topics it did not seem advisable to undertake the task of furnishing speakers on public health for the New York churches for the Sunday preceding the New York session Neither did it seem advisable to undertake the holding of a special meeting on public health open to the general public It is hoped that when conditions have returned to a more normal state, these functions of the Council can be resumed

OFFICE WORK

From May 16 1916 to May 1 1917 the secretary has received 5041 letters and sent 7733 letters Requests for information and the sources from which they have come are indicated in Table 2

TABLE 2—SOURCES OF REQUESTS FOR INFORMATION

Source	Number
Attorneys	5
Boards of education	4
Boards and departments of health	64
Clubs	84
Federal departments	19
Hospitals	15
Libraries	85
Life insurance companies	6
Medical societies	14
Ministers	13
Nurses	70
Physicians	467
Publications	35
Universities colleges high schools etc	109
Y M C and Y W C associations	7
Miscellaneous	1 129
Total	2 126

Subcommittees

The reports of the various subcommittees are appended herewith The members of these committees have labored faithfully and enthusiastically to advance the special lines of work assigned to them, and the results of their labors are herewith submitted for the careful consideration of the House of Delegates and its reference committees

Respectfully submitted
Frank Billings Chairman,
Walter C Cannon
Watson S Rankin
Henry M Bracken,
Milton Board
Frederick R. Green, Secretary

REPORTS OF SUBCOMMITTEES OF THE COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

Report of Committee on Social Insurance*

To the Council on Health and Public Instruction

Your Committee on Social Insurance has published during the past year a study of the statistics of the medical profession of the United States There has further been compiled by Dr Rubinow, the executive secretary, a review of all the compensation laws against accidents in the thirty-four states of the Union and also a study of the dispensary question in New York City being a type of the free medical services given in the large cities of the United States

In the past two years the committee has reviewed the subject of compensation against accident in the United States and abroad showing in a short review, the other fields of social insurance as developed in foreign countries

Health Insurance

Last year the committee concentrated its report on health insurance in the various foreign countries and the conditions in the United States which today are tending toward such laws or showing the beginning of these ideas in principle in the United States Since last June two state commissions—those of California and Massachusetts—have investigated the subject of health insurance and have reported favorably on it After reviewing the systems of social insurance in foreign countries and considering after public hearings the question of the advisability of compulsory health insurance in the state of California and after taking into consideration the condition of the wage earners of the state and their ability to take care of themselves against the hazard of sickness the commission states that as a result of these findings and after investigation of the conditions throughout the United States it has arrived at the conclusion that legislative provision for a state-wide system of compulsory health insurance for wage-workers and other persons of small incomes would offer a very powerful remedy for the problem of sickness and dependency in the state of California In selecting health insurance as the particular branch of social sons from the insurance whose compensation consists of maintenance only and certain officials of the empire, and there are certain other exceptions These people to become entitled to the insurance must have paid the regular dues for a certain period of time designated as the waiting time For the invalidity pensions the waiting time is 200 weeks, provided that during this time at least 100 weekly contributions have been paid, otherwise the waiting time is 500 weeks For old age pensions the waiting time is 1,200 weeks of contributions Time spent in military duty in peace or war or time lost from one's occupation because of sickness, properly attested, is credited as part of the waiting time though no contributions may be paid There may come under the invalidity and old age pension laws certain persons on the voluntary insurance basis These are administrative officials, foremen and technical officials, employees in commercial establishments, excepting apprentices, teachers and instructors and ships' officers whose incomes are more than $476 a year and not exceeding $714 There may also come under this voluntary insurance, regardless of the amount of their income, persons engaged in business on their own account and heads of establishments who do not regularly employ more than two wage-workers who are subject to the compulsory insurance, as well as persons engaged in domestic or homeworking industries, also persons whose only compensation for their work is free maintenance or persons who have been exempt from the compulsory insurance because of the temporary nature of their employment In case of voluntary insurance, benefits for invalidity are granted only after the insured person has paid 100 weekly contributions The benefits are provided for three types of disability, invalidity or permanent disability, sickness or temporary disability, and old age, regardless of any disability, affecting the insured person's earning power The invalidity pensions are paid to those persons regardless of their age who become disabled through age, sickness or other cause to such an extent that they suffer a permanent loss of earning capacity greater than one third of their earning ability The sick pensions are the temporary pensions paid those persons who are sick longer than the twenty-six weeks covered by sickness insurance

---

* Regarding Invalidity Old Age and Unemployment Insurance, and a General Summary Concerning Social Insurance

TABLE 4—NUMBER OF PERSONS ON PENSION ROLLS OF INVALIDITY INSTITUTES

Year	Current Pensions at the Close of the Year			Number of Pensions Granted Each Year		
	Invalidity Pensions	Sick Pensions	Old Age Pensions	Invalidity Pensions	Sick Pensions	Old Age Pensions
1900	405,335	5 118	188 472	124 588	6,463	10,790
1901	486 915	8 700	179,450	129,234	7,391	14,759
1902	574,842	12 145	163,530	141 481	8 695	12,816
1903	663 140	14 186	156,620	150,209	8,977	12,374
1904	734,955	16 685	145 466	142 790	10 517	12,069
1905	780,761	20 140	134,109	124 111	11,883	10,716
1906	814,575	22 097	125 605	111,685	12,060	10 789
1907	841,902	20 079	116,857	112 184	11,587	10 769
1908	868 086	19,087	108,637	117,224	12 209	10,986*
1909	893,585	18,502	102,362	115,264*	12,716*	11,003*

* W H Dawson 'Social Insurance in Germany"

TABLE 5—ESTIMATED NUMBER OF PERSONS INSURED AGAINST INVALIDITY AND OLD AGE COMPARED WITH POPULATION OF EMPIRE

Year	Population of Empire			Estimated No of Persons Insured
	Male	Female	Total	
1900	27 574 000	28,472,000	56 046,000	13,015 100
1901	27,985,000	28 886,000	56,871,000	13,198 100
1902	28,416,000	29,330 000	57,746,000	13,380 600
1903	28,824,000	29,752,000	58,576 000	13,567,200
1904	29,225 000	30,166,000	59,391,000	13 756 400
1905	29 721,000	30,593 000	60,341 000	13 948 00
1906	30 149,000	31,028 000	61 177,000	14,142,700
1907	30,640,000	31,443 000	62,083,000	14 958 118
1908	31,084,000	31,898,000	62,982,000	15,226,000

An invalidity pension is not paid if the claimant has brought the invalidity on himself If, on the other hand, the invalidity was sustained during the commission of a crime or of a deliberate offense so pronounced by a court of law, the whole or part of his pension may be allowed to his family, if it is living within the empire and dependent on the insured for support When an insured person reaches 70 years of age and is entitled to an old age pension, he may also at this age be receiving an invalidity pension and be entitled to one That pension, either invalidity or old age, which is the greater in amount, must be given to the insured at this age He is entitled to but one When incapacity is occasioned by an accident, a claim to the invalidity pension is only justified in so far as such pension would exceed the pension due under the accident insurance law

Under certain circumstances the law formerly required the return to the insured workman of one half the dues paid in to secure the rights under invalidity and old age insurance Since the introduction of survivor pensions these refunds of contributions according to Dawson have been discontinued The invalidity insurance is administered by invalidity insurance institutes These institutes are corporations possessing all the rights and duties of legal persons Besides the Board of Governors there is a supervisory committee which contains representatives of the employers and employees who serve without pay, and the law also permits the addition of several other persons on the board, such as physicians, insurance experts, and similar persons, whose specialty may be of use in the administration of the institute There are also special invalidity institutes of the miners, railroads and seamen These were permitted because these workers already possessed certain types of invalidity insurance when the general invalidity law was passed The dues of the invalidity insurance are paid by means of stamps which are purchased from an agency of the institute and then pasted on the receipt or membership cards Each invalidity institute publishes its own stamps which must be used by the persons insured in it Each insured person is responsible for obtaining his receipt card and responsible for bringing it each week to have the proper stamps affixed Any failure to obtain a card by an insured person is punished by a fine The employer is held responsible for the pasting on of the correct amount of stamps, both for the share of the insured person and for his own share The dues paid must cover the same time as the wage payment, except that if the employee begins a week of service the invalidity insurance week begins on Monday and ends on Sunday, the dues for that entire week must be paid by the employer even if the service continues for only part of a day Failure on the part of the employer to comply with the requirement means the imposition of a fine If the insured person loses his right to a pension by negligence of the employer, the employer is liable to a suit for damages In fact, employers have been required by courts to pay the entire cost of pensions, the right to which was lost through their failure to obey the law Cash payments are used in certain funds to which the miners and most of the state railway employees belong and both stamps and cash are employed in the marine insurance funds When the receipt card of the insured is filled with stamps, it must be returned to the local agency and a new card procured The insured person is required to preserve the certificates covering periods of illness and of military service, and forfeits his rights to include such periods in his waiting time if he cannot produce these certificates at the time his benefits under the law are determined The number of persons included under the law in 1909 was 15,444,300, 69 per cent being men and 31 per cent women Some 600,000 persons were voluntarily insured

ADMINISTRATION OF LAW

The bodies which administer the law have two main sources of income—contributions by the insured workmen and their employers in equal amounts and the yearly addition to every pension from the imperial treasury Both the invalidity and old age pensions are based on the amount of dues paid in and on a basis of wage classes The wage classes are five in number, viz wage class I, annual earnings $83 80 and under, wage class II, $83 80 to $130 90, wage class III, $130 90 to $202 30, wage class IV, $202 30 to $273 70, wage class V, over $273 70 The law requires the wages or earnings of the insured person to be computed as follows

In certain of the sick funds 300 times the wage rate adopted by these funds as the basis of collecting their dues, or the wages shall be assumed to be an amount fixed by the local administrative authorities with due regard to the actual average earnings of the insured, or, for seamen, the average earnings shall be specified by the imperial chancellor according to the navigation law, among miners the rate is 300 times the wages as estimated by the board of directors of the fund For all other persons, unless the administrative authorities fix a higher rate for special occupations, the rate shall be 300 times the average rate paid in that locality for unskilled labor Instructors, teachers, etc., belong to the fourth class, unless a higher rate is shown to have been received An insured person may have himself rated in a higher wage class by paying higher dues, but the employer in such case may not be required to pay a higher amount of dues

All pensions are composed of two amounts—first, the variable amount provided by the invalidity institute and, second a fixed amount provided by the imperial government The amount provided by the institute consists of two parts, a basic amount and a supplementary amount. For the old age pensions the amount provided by the institute consists of the basic amount only It is, therefore, a higher basic amount than that of the invalidity pension For invalidity and sickness pensions the basic amount varies for the various wage classes as follows wage class I $14.28, wage class II, $16 66, wage class III, $19 04, wage class IV, $21 42, wage class V, $23.80 In computing the basic amount of the pensions 500 contributory weeks are always used If 500 weeks of dues have not been paid then the number of weeks lacking may be calculated according to wage class I If more than 500 weeks of dues have not been paid then the 500 weeks averaging the highest wage payments paid are those used If the 500 weeks consist of different wage classes, then an average must be taken After the basic amount of the pension has been computed the amount is increased by a system of supplementary amounts to determine the number of weeks for which dues have been paid For each week a supplementary amount must be used for wage class I, 0 7 of a cent, for wage class II 4 1, for wage class III 1.9, for wage class IV 2 4 and for wage class V, 2.9 cents The pension therefore must consist of the basic sum plus the supplementary increase plus the imperial subsidy For further details of the complicated computations necessary the reader is referred to the twenty-fourth annual report of the commissioner of labor page 1371

A further opportunity (according to W H Dawson in Social Insurance in Germany) is offered to insured persons supplementing their old age and invalidity pensions by an amount of 25 cents at convenient times For every supplementary contribution of 25 cents so made the insurer will, on his claim to pension maturing receive the sum of one-half cent for every year that has elapsed since the contribution was made If the supplementary pension should not exceed $15, the beneficiary may require his payment in lump sum payment

Of the 2,471,265 pensions granted up to Dec 31 1910 75 4 per cent were granted on account of invalidity 20 per cent on account of old age, 4 6 per cent on account of sickness ending in most cases in permanent disablement On Jan 1, 1911 of the 1,034,000 pensions in force, 718 760 were for invalidity, 98,335 for old age and 19,965 were provisional sickness pensions The following table shows the invalidity pensions granted in 1910 according to ages

TABLE 6

Age	Number of Pensions	Age	Number of Pensions
20 to 24	3 154	50 to 54	10,810
25 to 29	5 262	55 to 59	14 180
30 to 34	5 430	60 to 64	21 468
35 to 39	5,501	65 to 69	21 087
40 to 44	6 182	70 and over	13,866
45 to 49	7 725		
			114 765

SOURCE OF INCOME

As has already been said, the main source of income of the invalidity insurance in Germany is the contribution from the employers and insured workmen in practically equal amounts As a matter of fact, with a certain number of workmen voluntarily insured there is a slight increase in favor of the amount paid in by the workmen In 1908 the funds obtained from interest on their large reserves amounted to about 18 per cent of the total receipts for that year The rate of interest obtained by the reserve fund was but 0 0357 per cent. About 17 7 per cent of the total was put in by the government in its definite stated amount for each pension given The rest of the funds were practically all contributions The contributions in 1908 amounted to $68 000,000, the subsidy of the imperial government to $12,000 000, and interest and other receipts to a little more than $12 000 000 Against these receipts that year were charged off $43 000,000 for benefits about $4 500 000 for administration and other purposes, leaving reserve funds at the end of the year of $354 500 000 The accompanying tables give the income and expenditures more in detail The whole cost of administration of this huge insurance scheme in 1908 amounted to 9 4 per cent of the expenditures

TABLE 7—SUMMARY OF FINANCIAL OPERATIONS OF INVALIDITY INSURANCE SYSTEM 1900 TO 1908

Year	Contributions from Employers and Insured Persons Each Contributing This Amount	Subsidies of Imperial Government	Interest and All Other	Total Receipts	Expenditures			Reserve Funds
					For Benefits*	For Administration and Other Purposes	Total*	
1900	$15,323 679	$7,821,301	$6,554 103	$44,522,762	$22 069,565	$2,676 061	$24 745 626	$201,290 654
1901	16 042,807	8 061,235	7,340 181	47 486,980	22 054,589	2,582,446	24 637 035	221 140,599
1902	16,539,308	9 008 227	8 054,310	50 141 163	28,658,559	2,843,541	31,502 100	239 779 652
1903	17 406,906	9,961 496	8 708,542	53 483 780	32 166 494	3 038 059	35,204,553	258,058,879
1904	18,836 448	10 776,581	9,314 649	56,763,126	35,308 681	3,336,822	38 645,503	276 176 501
1905	19 193,729	11 269 499	9,917,274	59,574 231	37,656,362	3,559,803	41 216 165	294 534,568
1906	20 245 014	11,604,311	10,550 760	62,675 108	39 517,317	3,883 259	43 400,576	313,809 100
1907	21 258,538	11,809 718	11 311 705	65 638 499	41 148 183	4 131,366	45 279 499	334 168 101
1908	21,946,264	12,024 197	12 123,209	68 039,934	43,191 472	4 489 236	47 680 708	354,527,326

* Including the Imperial subsidies

COST OF INVALIDITY PENSIONS

In calculating the cost of invalidity pensions it is of great importance to know how many individuals of those granted pensions for tuberculosis or sickness or invalidity from any cause are liable to drop out each year The following table shows the German experience from 1891 to 1899, and the rates given are based on 444 654 cases of invalidity pensions granted in the above years inclusive Seventy per cent of these were men and 30 per cent. women The number of these pensioners ceasing to receive pensions during the period was 210 482 of which approximately 95 per cent were due to death, 4 per cent. to recovery and 1 per cent. to other causes for treatment at a period of life when the economic and social value of health is a matter of most serious concern to the individual and to the State.

Over one half of the patients—that is, 54 4 per cent of the males and 54 6 per cent of the females—were admitted to treatment in the same year in which the symptoms of the disease were first recognized

The general condition of the patients on admission was good in the case of 32 9 per cent of the male and 28 2 per cent of the female patients It was medium in the case of 36 8 per cent. of the male and 31 7 per cent of the female patients and, finally, it was bad in the case of 30 2 per cent of the male patients and of 40 1 per cent of the female patients The general condition was improved during treatment in the case of 57 5 per cent of the male and 59 per cent of the female patients

The sputum of patients was ascertained with certainty to contain the tubercle bacillus in the case of 45 3 per cent. of the male patients and of 30 per cent of the female patients Of this group of patients, separately considered, 34 4 per cent of the males and 25 per cent of the females were free from tubercle bacillus on discharge

The seriousness of the disease, or the degree of lung impairment, as determined by the Turban stage of the disease, was as follows

Of the male patients, 31 3 per cent, and of the female patients 28 4 per cent, were in stage I of the disease, and 19 9 per cent of the males and 22 9 per cent of the females were in stage I II of the disease Of the patients in stage II of the disease, the proportion of males was 21 3 per cent and of the females 23 1 per cent, and in stage II III, 11 7 per cent and 12 5 per cent, respectively The proportion of patients in stage III, or the far advanced stage of the disease, was 15 8 per cent. for males and 13 2 per cent for females

Only one lung was affected in the case of 25 per cent of the male and 19 7 per cent of the female patients Of these, 62 6 per cent and 63 1 per cent, respectively, had the right lung affected, and 37 4 per cent and 36 9 per cent, respectively, had the left lung affected

A cure, from a medical point of view, was obtained in the case of 12 7 per cent of the male and 15 3 per cent of the female patients A material improvement, including the cured cases, was obtained in the case of 50 per cent of the male and 48 9 per cent of the female patients A relative improvement was secured in the case of 34 2 per cent of the male and 26 8 per cent of the female patients, and 10 3 per cent and 17 per cent, respectively, of the patients remained unchanged In the case of 5 1 per cent of the male and 7 1 per cent of the female patients the condition on discharge was worse than on admission, but the percentage of deaths during the period of treatment was only 0 4 per cent for male patients and only 0 2 for female patients

An economic result, with entire restoration of earning capacity, was obtained in the case of 76 9 per cent of the male and 73 7 per cent of the female patients, but in addition thereto 13 4 per cent. of the males and 12 per cent of the females had their earning capacity partially restored to them, while only 9 3 per cent of the male patients and only 14 per cent of the female patients were unsuccessfully treated from an economic point of view

During the year 1912 the Imperial Board of Health published a supplementary report on the results of sanatorium treatment for the period 1902 to 1904, which confirms in all essentials the experience data for 1896 to 1901 The results of this supplementary investigation are briefly summarized, as follows

The statistical investigation includes 34,071 male and 12,632 female patients treated and cared for on account of tuberculosis of the lungs, with an average duration of treatment for males of 86 6 days and for females of 95 8 days

The cost of treatment was provided for by social insurance institutions in the case of male patients to the extent of 85 4 per cent. and of female patients to the extent of 85 4 per cent and of female patients to the extent of 75 7 per cent

Of the male patients 44 3 per cent and of the female patients 59 3 per cent. were of the age period 20 to 29 years, and of the male patients 31 8 per cent and of the female patients 18 8 per cent. were of the age period 30 to 39 years.

A parental history of tuberculosis was ascertained in the case of 25 2 per cent of the male patients and of 36 7 per cent of the female patients Tuberculosis among brothers and sisters was ascertained in the case of 19 6 per cent of the male patients and of 24 4 per cent of the female patients In addition thereto, in the case of 2 6 per cent of the male patients and of 2 9 per cent of the female patients, respectively, the wife or the husband was ascertained to be tuberculous The proportion of families with tuberculous children was only 0 5 per cent in the case of male patients and only 0 4 per cent in the case of female patients

About two thirds of the patients, or 61 9 per cent for males and 64 7 per cent for females, entered the sanatorium during the year in which the disease first became apparent

The general condition of patients on admission was apparently good in the case of 23 1 per cent. of the males and of 20 7 per cent. of the females The condition was average in the case of 49 5 per cent of the males and of 42 6 per cent of the females, and the condition was bad in the case of 27 4 per cent of the males and of 36 8 per cent of the females An improvement in the general condition during the period of institutional treatment took place in the case of 64 2 per cent of the male and of 66 1 per cent of the female patients

The bacilli of tuberculosis was bacteriologically ascertained to be present in the case of 35 1 per cent of the male patients and of 21 8 per cent of the female patients As a result of treatment 33 4 per cent of the male patients and 29 4 per cent. of the female patients were free from bacillary evidences on discharge

Of the male patients on admission 37 3 per cent were in the first Turban stage of the disease, 46 2 per cent in the second, and 16 5 per cent. in the third Of the female patients 51 per cent were in the first Turban stage, 37 4 per cent in the second, and 11 6 per cent in the third In the case of 23 3 per cent of the male patients and of 24 8 per cent of the female patients only one lung was affected with the disease on admission The right lung only was affected in the case of 67 5 per cent of the male patients and of 65 7 per cent. of the female patients.

A complete cure was obtained on discharge in the case of 4 5 per cent. of the male patients and of 6 7 per cent of the female patients An improvement in the condition of the lungs was secured in the case of 86 7 per cent of the male patients and of 81 7 per cent of the female patients, and of these, in the case of 27 per cent and 23 1 per cent, respectively, the improvement was so decided that there was a change to a more favorable Turban stage of the disease In only 6 3 per cent of the male patients and in only 8 8 per cent. of the female patients was there no change in the condition of the lungs during treatment The proportion of deaths during treatment was only 0 3 per cent for male patients and only 0 2 per cent. for female patients.

A complete economic result—that is, restored wage earning capacity—was obtained in the case of 53 9 per cent of the male patients and of 60 per cent of the female patients But, in addition thereto, in the case of 28 6 per cent and of 24 2 per cent, respectively, a fairly satisfactory economic result was secured—that is, restored wage earning capacity of limited extent for a reasonable period of time

The comparative statistical facts for the investigations of 1896 to 1901 and 1902 to 1904 are conveniently summarized below

COMPARATIVE RESULTS OF TREATMENT FOR TUBERCULOSIS IN GERMAN PUBLIC SANATORIUMS

		1896 to 1901		1902 to 1904	
		Males	Females	Males	Females
Number of patients		15 769	4 008	34,071	12 632
Average duration of treatment	days	89.2	94 4	86 6	95 8
Ages on admission					
Under 20 years	per cent	10 5	20 4	8 5	16 6
20 to 29 years	per cent	44 0	57.8	44 3	59 3
30 to 39 years	per cent	30 1	17 6	31.8	18 8
40 years and over	per cent	15 4	4 4	15 4	6 3
Tuberculous parents	per cent	26 4	30 7	25 2	36 7
Tuberculous brothers and sisters	per cent	16 5	21.2	19 6	24 4
Previous duration of disease less than one year	per cent	54 4	54 6	61 9	64 7
Previous sanatorium treatment of at least six weeks	per cent	9 8	8 2	16 9	12 3
Good nutrition on admission	per cent	17 9	18 0	19 1	18 9
Average nutrition on admission	per cent	48.9	44 0	51 2	50 5
Poor nutrition on admission	per cent	33 2	37 5	29 7	30 6
Gain in weight	per cent	93 6	92.3	95 9	94 1
Average increase in weight	pounds	13 0	11 5	14 6	12.8
Physical condition on admission					
Good	per cent	32 9	28 2	23 1	20 7
Average	per cent	36 8	31 7	49 5	42 6
Poor	per cent	30 2	40 1	27 4	36 8
Physical condition during treatment					
Improved	per cent	57 5	59 0	64.2	66 1
Unchanged	per cent	40 1	38 4	34 0	32 4
Worse	per cent	2 4	2 6	1 8	1.5
Cough and expectoration on admission	per cent	91 1	65 7	92 0	65 0
Cough only	per cent	4 5	18.5	3 3	17 6
No cough and expectoration on discharge	per cent	22.8*	28 2*	20 3*	32 7*
Bacillary diagnosis positive on admission	per cent	45.3	30 0	35 1	21 8
Bacillary diagnosis negative on discharge	per cent	34 4†	25 0†	33 4†	29 4†
Fever on admission	per cent	13.8	19 4	14 5	14 9
No fever on discharge	per cent	68 6‡	63 3‡	71 9‡	57 3‡
Night sweats on admission	per cent	20.8	27.3	25 4	18 3
No night sweats on discharge	per cent	90 7§	85.2§	91 7§	86.9§
Turban stage on admission					
First	per cent	31 3	28 4	37 3	51 0
Second	per cent	52 9	58 4	46 2	37 4
Third	per cent	15.8	13.2	16 5	11 6
One lung affected	per cent	25 0	19 7	23.3	25.6
Condition of lungs on discharge					
Improved	per cent	84 2	75 7	91 2	88 4
Stationary	per cent	10 3	17 0	6 3	8 8
Worse	per cent	5 1	7 1	2.2	2 6
Deaths	per cent	0 4	0.2	0 3	0 2

* Of those having cough and expectoration on admission
† Of those showing positive bacillary diagnosis on admission
‡ Of those having fever on admission
§ Of those having night sweats on admission

The preceding tables show the percentage of those who received full treatment who were discharged with restored earning capacity and who retained their earning capacity at the end of specified years subsequent to their discharge from 1897 to 1905

The increasing improvement of per cent of living and active from 1897 to 1905 is very striking It is also seen from these tables that the percentage of the results to women is better than to the men, probably due to the less severe labor to which they are subjected and also to the diminished amount of alcoholic excesses in which they are apt to indulge

The total cost of treatment and care for all causes for the period of 1897 to 1899 was $35,989,774 Of this sum $23,739,340 was paid out for the treatment of tuberculosis, which was 66 per cent of the expenditures on account of all diseases, including tuberculosis Of the total number of male patients treated 48 7 per cent were on account of pulmonary tuberculosis and 36 5 per cent of the female patients were treated for the same disease

Since 1897 the number of persons treated and cared for in special institutions owned or controlled by the state invalidity insurance institutions has increased nearly tenfold In 1909, 42 4 per cent of all persons treated and cared for were treated for pulmonary tuberculosis, and of these 98 4 per cent. received full systematic and largely indoor or special institutional treatment Experience has shown that only by such treatment can the required economic results be obtained Hoffman further states that the considerable financial expenditures on this account are justified by the fact that pulmonary tuberculosis, according to the investigations of 1896 to 1899, held the third position as the primary cause of invalidity among the men and the second position among the women insured with the German state invalidity insurance institutions Ten years later, between the years 1905-1909, 97,392 males were treated for pulmonary tuberculosis and 43,542 females in whom the disability was removed or arrested This was at an expense of $13,500,000 and represented 81 8 per cent of the men and 84 3 per cent of the women treated During the same period 21,624 men and 8,116 women were unsuccessfully treated and the tuberculous lesions not arrested nor the disability removed This was at an expense of $4,100,000 and represented 18.2 per cent of the men and 15 7 per cent of the women The average duration of those in whom the disease was removed or arrested was seventy-six days for men and eighty-four days for women, at an average expense of $101 09 for men and $84 for women Those in whom the disease was not removed remained under treatment on an average of forty-seven days for men and fifty-five days for women and at an average expense of $61 02 for men and $55 14 for women The economic results are further shown by taking the year 1905, in which 81 3 per cent of the men and 83.2 per cent of the women treated for pulmonary tuberculosis were discharged with restored earning capacity, and at the end of five years, that is, at the end of 1909, 44 per cent of the men and 52 per cent of the women still retained their earning capacity This is all the more striking since we are justified in assuming from the German statistics that without such systematic and effective treatment the large majority of patients would have died from the disease within two years from the date of attack. These patients who still at the end of five years

NUMBER AND PER CENT OF PATIENTS RECEIVING FULL TREATMENT WHO WERE DISCHARGED WITH RESTORED EARNING CAPACITY AND WHO RETAINED THEIR EARNING CAPACITY AT END OF SPECIFIED YEARS SUBSEQUENT TO DISCHARGE, BY SEX 1897 TO 1905

Year of Discharge	Discharged with Restored Earning Power	Retaining Earning Power at end of year												
		1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Number of Males														
1897	1,760	1 542	1 032	703	705	683								
1898	2,812		2,029	1 488	1,355	1,157	1 043							
1899	4 476			3,854	2,719	2,235	1,919	1 738						
1900	6,117				5 484	3,905	3 185	2,807	2,299					
1901	8,272					7,390	5 476	4,591	3 766	3,069				
1902	9 437						8,574	6 601	5,547	5 190	4 665			
1903	11 703							10,807	8 396	7,396	6,555	6 152		
1904	13,341								11,847	9 926	8 547	7,820	7,216	
1905	15,516									13,904	11,848	9 786	8 083	7,871
Per Cent of Males[1]														
1897	67 7	61	42	20	28	25								
1898	73.9		67	44	37	31	28							
1899	74.2			67	48	39	33	30						
1900	72.5				66	48	40	35	30					
1901	76.5					70	53	45	38	32				
1902	7[illegible] 4						72	57	48	44	40			
1903	78.8							73	59	51	46	43		
1904	78 7								73	61	53	48	44	
1905	81 3									76	63	54	48	44
Number of Females														
1897	497	465	348	231	252	225								
1898	811		751	464	441	409	399							
1899	1,220			1 082	801	690	636	589						
1900	1,9[illegible]0				1,735	1,308	1,167	1 010	848					
1901	2,9[illegible]7					2,645	2,173	1,822	1,546	1,245				
1902	3 448						3,184	2 537	2 121	2,048	1,894			
1903	4,284							3,892	3 171	2,554	2,629	2,519		
1904	5,[illegible]03								4 692	4 072	3 654	3 475	3 196	
1905	6,272									5,581	4 749	4,285	3,831	3 608
Per Cent of Females[1]														
1897	67.5	64	50	35	36	32								
1898	73.5		69	49	43	39	38							
1899	73.[illegible]			67	51	43	40	37						
1900	[illegible]2 4				67	52	46	40	35					
1901	77 4					72	60	51	45	29				
1902	80.1						76	62	54	[illegible]0	47			
1903	82.2							77	64	57	53	50		
1904	81.2								76	66	59	55	51	
1905	83.2									78	67	60	55	52

---

[1] In calculating the percentages of those receiving full treatment who retained their earning power to the end of the specified periods after discharge cases lost sight of that is, uncontrolled cases have been deducted from the numbers representing persons receiving full treatment

retain their earning capacity sufficient at least to provide in part for their own support are of the greatest economic value to the state even though the cost of treatment may be somewhat larger than the direct financial gain to the insurance institutions on account of diminished payments in the form of disability annuities Hoffman concludes that "neither in the official reports nor in the general literature of the subject is there anywhere sufficient statistical or other evidence to prove conclusively that the efforts made to bring about restored earning capacity of invalid members have paid a full return on the money invested in special institutions and the annual disbursements in behalf of patients and their immediate dependents In course of time no doubt such proof will be forthcoming and considering that the entire plan of compulsory social insurance rests primarily, not on financial but on general considerations of public welfare, it is self-evident that the efficacy and value of the system cannot be tested solely by reference to the annual balance sheets of the institutions individually considered, or even on the basis of their aggregate experience" It seems thus evident whether from the economic viewpoint or from that of hygiene and sanitation and the general health and welfare of the race that the enormous funds necessary successfully to combat tuberculosis are justified and usefully employed

It is with difficulty, in considering any scheme of invalidity, that one can separate it from the inevitable invalidism brought on by the approach of physiologic old age This comes sooner to some men than to others, and the actual number of years that have passed over the heads of men do not designate an even failure of their mental or bodily vigor To some the invalidity comes early and to others it does not arrive until late But the circumstances of overwork, of overtime, of the hard unending lives of toil that men in huge industrial nations undergo bring on an earlier deterioration from old age than the three score years and ten that our fathers knew when, as agricultural patriarchs, they still were able to dominate their families and be recognized as the head of the gatherings of their children and their grandchildren

EXPENDITURES FOR TREATMENT AND CARE OF INVALID MEMBERS OF GERMAN STATE INVALIDITY INSURANCE INSTITUTIONS DURING 1909, BY SEX

Expenditures on Account of	Amount	Per Cent
Tuberculosis of the lungs, full treatment		
Males	$2 816 610	48 75
Females	1,063,652	18 41
Tuberculosis, temporary or partial treatment		
Males	2,720	0 05
Females	1,322	0 02
All other diseases, full treatment		
Males	1,098,034	19 00
Females	612,918	10 61
All other diseases, temporary or partial treat		
Males	97,394	1 69
Females	84,923	1 47
Total on account of tuberculosis	$3,884,304	67 23
Total on account of other causes and diseases	1,893,284	32 77
Total expenditures for all causes	$5,777,588	100 00

OLD AGE INSURANCE

The methods of social insurance by which ample provision is made for old age are diverse, and again we come to the voluntary insurance, state subsidies, compulsory insurance and, casting insurance methods aside, direct pensions given by the state without contributions from the beneficiaries As in all forms of social insurance, the voluntary contributions have never been successful in building up a scheme which has adequately attained the object for which it was formulated Youth is not willing to accept the idea that it must give up its present pleasures that it may be cared for years hence in an old age that it may never reach Many of the countries, such as France and Belgium, have had to give up their voluntary systems and turn to subsidized and compulsory methods The Scandinavian countries have done the same Germany, as we have already seen, has used both subsidy and compulsion Other countries, such as Great Britain, have cast aside all idea of insurance or the group principle of protection, which is the insurance system itself, and given an out and out old age pension After considering it again and again for over fifty years, the English came to the conclusion that the simplest method was to use the ability of the state, through taxation, to obtain its funds and that the workman was worthy of his hire, as he had faithfully given his labor and the results of his labor through his life to the state and the community, and that as a reward of his labors he deserved his pension This is the most common point of view in establishment funds and in countries where social insurance is not highly developed, as in the United States

The old age problem of today is not that of our ancestors when the country was on an agricultural basis In the majority of instances today the question is one of an industrial basis and the problems of the family have greatly altered The obligation of parents to children has remained, but the obligation of the struggling, underpaid child endeavoring to build a family of his own or her own and also sustain the unproductive parent who, through old age, has ceased to bring in any economic asset and has become really an economic burden to the family, is a vastly different problem We not infrequently see the best years of vigorous youth sacrificed to the care of the parents, and while we honor it and admit it as a high type of filial duty and filial self-sacrifice among those on whom the pinch of poverty does not come or does not come excessively, when the economic situation of the family is such that necessity demands that each member shall bring in his quota of revenue to keep the family together, then sad as it is, we must realize that for the good of the state and the community the vigorous young wage earners should be relieved of the burdens that unremunerative old age put on them "The problem here is that of poverty caused by inability to find employment, because the productive power has waned and waned not temporarily but forever"[4] Preventive medicine and sanitation have increased the average length of life, and although because of a high infant mortality it is said that the average length of life is but thirty-five years and that the average wage earner must not expect to reach old age and therefore need not make any provision or look for any provision to be made for him, this does not put the problem fairly or truthfully The American Experience Tables of Mortality, compiled fifty years ago, understate the improved expectations of life today and yet these tables show that of all men who have reached the age of 30 nearly three fifths may expect to reach the age of 65, at which time they may expect to have eleven more years of life, and of the same men at 30 nearly one half survive at 75 and are still justified in the hope that there is an even chance for eight and one-half years longer existence The American Fraternal Orders show that ten to fifteen years of life over 65 is practically a certainty to more than one half the wage earners The American statistics show that in 1880 the number of persons 65 years old and older constituted 3 5 per cent of the population, in 1890, 3 9 per cent , in 1904, 4.2 per cent, and in 1910, 4 3 per cent Considering it from an occupational standpoint, the number of persons over 65 years of age per thousand of men over 15 years of age has increased from 54 in 1880 to 60 in 1890 and 63 in 1910, but among males gainfully employed over 15 years of age persons of 65 years and over, constituted only 50 per thousand in 1890 and 47 per thousand in 1900 The number of old men, therefore, has been increasing in this country, while the proportion gainfully employed has been decreasing It is further shown that in some employment, such as agriculture, old age does not make so much difference and 6 1 per cent of the men employed were over 65 years of age, in the professions 5 5 per cent., in manufacturing and mechanical pursuits only 3 5 per cent, and in trades only 3 per cent As men grow old, moreover, they are shifted to more unskilled occupation, as is shown by the fact that among unskilled labor the percentage of males over 65 is 12 per cent and among railroad employees 5 per cent

---

[4] Rubinow, I M "Social Insurance"

MASSACHUSETTS COMMISSION

The Massachusetts Commission on Old Age Pensions found that the average age at which the wage earning power was lost in the case of those wholly incapacitated, was 68 years, the age at which the earning power was impaired, in the case of those partially incapacitated, was 64 These averages are based on returns for 870 and 822 cases, respectively The average ages of loss or impairment of earning power as given indicate that the normal pensionable age, falling between the limits of 64 and 68, is not far from 65

The census of 1910 showed that there were 6,216,674 persons over 60 years of age in the United States, as shown in the following table

60 to 64 years	2,267,150
65 to 69 years	1 679 503
70 to 74 years	1 113 728
75 to 79 years	667,802
80 to 84 years	321 754
85 to 89 years	122,818
90 to 94 years	33 473
95 to 99 years	7,391
100 and ove	3,555
	6,216 674

Squier states that there were approximately 1,250,000 former wage earners who have reached the age of 65 years in want and are now supported by charity, public or private, and are calculated by him on the investigation made by the Massachusetts Commission, as shown in the accompanying table

DEPENDENT POPULATION SIXTY-FIVE YEARS AND OVER

	In Massachusetts (Determined by the Mass Commission)	In the United States (Estimated by Mr L W Squier)
In correctional institutions	556	15 180
In insane asylums and hospitals	1,961	53,544
In almshouses	8,480	95 128
In benevolent homes	2,598	71 024
By public outdoor relief	8 075	83,996
By private outdoor relief	2,312	63 112
By United States pensions	27,230	744,188
	41,212	1 123,172

The Massachusetts Commission[5] further found that of the aged poor studied 22 9 per cent were able bodied, 61 6 per cent were wholly incapacitated and 15 5 per cent were partially so It further found that their physical condition was defective through being aged and infirm in 26 9 per cent., through chronic diseases in 32 4 per cent., through so-called rheumatism in 23 1 per cent, and 13.3 per cent. were crippled and deformed There were 3 8 per cent. incapacitated through blindness and the insane, epileptic and feeble-minded totaled 6 3 per cent

PROBLEMS OF THE PRESENT AND THE FUTURE

In considering any insurance scheme for the help of old age there are two situations which must be faced one is, what is to be done in the immediate present with those already old and already poor and those who in a few years, must face the destitution of poverty and old age combined? This is an entirely separate question from that of what are we going to do in the future when the vigorous youth of today will reach the period of their declining power and ability to go on with their economic self-support Old age insurance even though compulsory and universal, even though combined with invalidity as in France and Germany, had to face these two problems and make provisions for the present in the early days of their laws by practical old age pensions and instituted old age compulsory insurance for the future Old age pensions may continue either on the sliding scale of England or the outright definite scale of France providing for both present and future at one time.

When the British Act of 1908 granted pensions to those of 70 years of age it was expected that 386 000 persons would be entitled to this pension During the first year of the application of the Act the applications rose to 667 000 so that in their population of 44,000,000 nine per thousand were over 70 years of age and had an income of less than $2 per week, and this in addition to some 414,000 paupers in poor houses and other public institutions As the total number of persons over 70 years was approximately 1,250,000, it shows that nearly 1,080,000—or 86 per cent—of the men and women of that age needed relief In Germany, in 1891, the first year of granting old age pensions and invalidity pensions, the number of pensions for old age were 132 926, while the invalidity pensions were thirty-one In 1892 the invalidity pensions were 17,784 and the old age pensions 42,128 In ten years, in 1902, the old age pensions had dropped to 12,816 and remained at just below this level, while the invalidity pensions had risen to 141,481 Thus in the beginning the old age pensions were 11 5 per thousand insured In 1908 there were but 1 3 per thousand insured, which is probably the normal yearly average for Germany Squier places the old age situation thus

> It is notable that, after the age of 60 has been reached, the transition from non-dependence to dependence is an easy stage—property gone, friends passed away or removed, relatives become few, ambition collapsed only a few short years left to life, with death a final and welcome end to it all—such conclusions inevitably sweep the wage earner from the class of hopeful, independent citizens into that of the helpless poor[6]

Let us take up then, in detail, what the various countries abroad have done to meet this situation

OLD AGE PENSIONS IN GERMANY

Beginning with Germany, the old age pensions of Germany are provided for from the same funds as the invalidity insurance of which we have just spoken In 1908 there were some 166,000 old age pensions in force The pensions are calculated on a similar basis to that of the invalidity pensions and based on the same five classes of wages at the regular sum of $11.90 annually from the government for each pension The insured must, however, have paid his dues for 1,200 weeks and the dues thus paid, if in different wage classes, must be averaged in computing the pension If he has been sick or in military service, the weeks in which he has not paid dues shall be counted as part of his 1,200 weeks of service During the transition period, from the time the law was enacted until the first twelve hundred weeks should be up—that is, until the year 1914—it was provided that old age pensions should be paid to those insured persons who had paid more than 400 weeks of dues, and the figure 400 was used in the computation instead of 1,200 In 1909 the weekly contributions of the employers and employees were increased slightly In wage class I, from 3 3 to 3 8, in class II, from 4 8 to 5 7, in class III, from 5 7 to 7 1, in class IV, from 7 1 to 9, and in class V, from 8 6 to 10 9 This was due to the introduction of the widow and orphan insurance which provided "adequate provision for dependent survivors in case of the death of the insured"

The German system, therefore, is practically a compulsory contributory old age insurance in which, with the stated amount of a subsidy and with the entire management of the administration by the state, the expenses of the insurance are borne pretty nearly equally between state and employer and employee

OLD AGE PENSIONS IN AUSTRIA

Other countries have taken up, not the universal compulsory old age and invalidity insurance such as Germany but the compulsory insurance—either old age or invalidity—for special classes or special industries In Austria, miners' provident funds have existed since 1280, but the first uniform regulation of the funds was in 1854 when the mine owners were forced to create special societies for their employees, providing benefits in case of sickness, accident or invalidity, whether from old age or other causes In 1889 this law was finally amended so that each society must have two funds separately administered one fund for the payment of sick and funeral benefits and another fund for pensions to members invalided through sickness, accident or old age as well as the widows and orphans of deceased members The benefits under the sick and funeral benefit funds must not be less than those paid by the general laws for similar benefits The pension for permanent total disability, whether caused by invalidity, sickness, old age, or industrial accident, must not be less than $40 60 for men and $20 30 for women members Pensions are granted only for total disability There are no pensions for permanent partial disability Widows were to receive an annuity payable until remarriage or death, or at least one-third the pensions due the husbands One sixth annuity is paid to each legitimate child up to the completion of the fourteenth year or, if both parents were dead, this pension was one third of what the deceased father was receiving or which he could have claimed had he been permanently invalided, but the total sum received by the widow and orphans could not surpass three fourths of the entire pension of the deceased member The employers and the employees provided equal contributions to this fund, except in the case of the employees receiving over $500 a year when they must bear the whole expense themselves Both the pension and the sickness funds must accumulate reserve funds in manner regulated by law

---

[5] Report of the Massachusetts Commission on Old Age Pensions Annuities and Insurance

[6] Squier L. W Old Age Dependency in the United States p 28

In 1906 Austria[7] also passed a law providing against invalidity and old age and granting pensions to widows and orphans of office employees and clerks and other salaried employees This law has been in operation only since 1909 All office employees between the ages of 18 and 25 whose annual earnings are between $120 and $600 are obliged to insure The insurance is given for this amount only and the few whose wages fall below $120 are classed with the workingman proper for whom other invalidity laws were being planned

A waiting period of 120 contributory months is fixed for the invalidity pensions, as well as for pensions to widows and orphans For the old age pensions the waiting period is 480 contributory months The invalidity pensions are composed of two parts the first, known as a basic sum, varies with the class of insured from $36 in class I to $180 in class VI The second sum, considered a bonus, begins with the end of the waiting period and varies with the class to which the insured belongs during the period between the close of the waiting time and the period of invalidity The old age pension is of the same nature and is paid on reaching the limiting age, at the end of the longer waiting period, without the necessity for showing incapacity Widows receive one half the pension the husband would have enjoyed Orphans receive one third in case of death of one parent and two thirds in case of death of both parents But the sum of all pensions must not exceed the maximum for the man himself Should the total pension be twice as great as the basic sum for which the deceased was entitled, after paying for 120 months, the amount may be settled by one payment If death ensues during the waiting period, the widows and orphans receive a settlement instead of the pension The four lower classes of employees pay one third the premium, employers paying two thirds The upper two classes, the employer and employee each pay half Employees whose income is more than $1,440 pay the entire premium themselves Premiums are on the capitalized value plan—that is, sufficient contributions are collected to set up a capitalized value for each annuity at the date it becomes a liability, and average from $1 20 to $6 monthly, depending on the class The only state contribution is that of $20,000 a year for management expenses Administration is in the hands of the central pension office at Vienna and the general representative of employees and employers in equal proportions, the chairman being appointed by the state

OLD AGE INSURANCE IN FRANCE

France has a special compulsory old age insurance for mining, sea faring and railroading The insurance of seamen against old age invalidity is one of the oldest examples of compulsory old age insurance in France With the exception of a few months during the French Revolution, it has been in continuous operation since 1673 The final modification into the present law dates from 1908 The registered French seaman is entitled to a pension after 300 months' service, when he reaches the age of 50 years If he becomes so disabled that he cannot serve on board a vessel, he can be pensioned before reaching this age. A commission determines his disability Seamen serving on the high sea in high sea navigation or fishing must pay 5 per cent. of their wages toward this fund Certain classes of seamen in costwise trade and fishing pay fixed monthly dues which serve as a limit for the dues of the same grade who contribute 5 per cent of their wages Ship owners are required to pay an amount equal to three fifths of the amount paid by their employees, proprietors employing foreign seamen are taxed 8 per cent of the wages of such seamen or three fifths more than the fixed contribution paid by certain classes of seamen Registered seamen who navigate their own boats are exempt from the proprietor's contributions, likewise their widows and orphans under 16 years of age, if they own a boat

These pensions are graded according to the class, from first class masters through subordinate officers in vessels of the fisheries and piloting service down to ordinary sailors A partial pension is granted to registered seamen who have served at least 180 months, of which at least 100 months were spent on board of commercial or fishing vessels, who, in the opinion of the commission, have become incapacitated for sea duty This pension is calculated on the rate of 1/300 of the minimum rate for each month of service of the full pension, plus the supplementary allowance of $11 58 per annum The widow receives a pension if the husband was drawing a pension at the time of his death and if the marriage took place two years before the seaman had become entitled to a pension, or if the marriage took place two years before he ceased his sea service and has already served 300 months A childless widow must be at least 40 years of age before being entitled to a pension If she has children, her age is not considered If she is divorced, she has no right to a pension Remarriage forfeits the widow's pension, if the second husband is drawing a pension If the second husband dies or is divorced, the widow's former rights are revived Widows in need receive an annual pension of $19 30, even if not receiving pensions and not divorced if their husbands died at sea or after fifteen years of service, even if these had elapsed before the promulgation of the present law Widows receive, in addition, a supplementary payment of 77.2 cents per month for each child under 13 years of age If the deceased seaman leaves children of another marriage, or illegitimate children, they are entitled to a portion of the widow's portion, not exceeding in the aggregate one half the regular allowance If the seaman leaves no widow or if the widow dies or is disqualified, the children under the age of 16 receive the widow's pension, even if there is but one child As soon as one of a number of children reaches the age of 16 his share is distributed among those remaining under that age The pensions granted are quite high compared with other pensions in France They vary between $69 48 and $115 80, and for widows between $46 32 and $61 76 The seamen funds also help support seamen's homes, hospitals, schools, etc It has paid large sums of money into the general state treasury from its funds and again has received large subsidies from the state

Another group of workmen protected by compulsory old age insurance in France is that of the miners All workers and salaried employees of mines, regardless of sex, are subject to the law This includes underground workers and workers in industrial operations which, according to the law, are dependent on mining operations, and workers in establishments affiliated with mining establishments Employees engaged in clerical work, office work or occupations directly connected with the mine are subject to the obligation to insure The cost of this insurance is divided equally by the employer and the workman The amount of the pension obtained from the payment of these two parties is increased by an annual subsidy from the state and the National Retirement Fund acts as a central body administering the insurance. The amount of the pension also depends on the amount of contributions paid in The old age pension in this case begins at 55 years of age Because of invalidity, the right to a pension may begin at an earlier age. Under the rules of the National Old Age Retirement Fund the pensions are computed on the system of alienated capital. That is, there is no payment back to his heirs on the death of the pensioner. But the law permits the insured person to have his own share of the payments accorded to him on the reserve capital payment—that is, the amount of contributions of the employee can, at his option, be paid back to his heirs on his death.

---

[7] Frankel and Dawson Workingman's Insurance in Europe"

These old age pensions to miners are calculated on the hypothesis that they begin at the ages of 13, 14 or 15 years, are regularly paid, and on a basis of earnings of the higher grade of workmen for 36 years, the employee paying 4 per cent of his wages previous to marriage and 3 per cent after marriage. A hypothetical average for the married workman at the age of 55 is $73.40. A hypothetical single worker paying 4 per cent of his earnings would average about $90.34. On Dec. 31, 1897, there were 313 establishments subject to the law in which 164,776 persons were insured in the National Old Age Retirement Fund. It often happens that workmen leave the mine to obtain employment in a factory or for other reasons leave no address and in 1902 there were over 50,000 accounts to which no claim was made.

The railroad pension funds were made compulsory for all large railroad systems Jan. 1, 1911. This covers nearly 300,000 persons with their wives and children. The law is limited to the larger railroad systems, about six systems in all and provides for half salary after twenty-five years of service and attaining an age varying between 50 and 60 years, according to the class of service, reduced invalidity pensions after fifteen years of service and even without any length of service qualifications if invalidity is due to the service and half pensions to widows and orphans, contributed by employees equal to 5 per cent of their earnings and the rest contributed by the railroads. If an employee leaves the service after fifteen years of membership for any reason except his invalidity he is entitled to a pension maturing at the same time at which it would mature if he had remained in the service but computed according to the actual length of service—that is, with a reduction of 2 per cent of the average salary for each year of membership below 25. If an employee separates from the service before fifteen years of membership in the fund or service, he is not entitled to any pension but may claim the repayment of the deductions from his own salary, with interest accrued. If, however these deductions have been used for deposits in the National Old Age Retirement Fund or in the National Death Insurance Fund then the employee must receive his deposit book or his policy instead of a cash payment. This amount is doubled in case of an employee who is adjudged an invalid, either by the administration of the railroad or by the Retirement Commission because of illness injuries, or infirmities which did not result from service if he must retire before fifteen years of service. If an employee dies after having been granted a pension his widow is entitled to half that pension for life and if there be no widow, the orphans under 18 years of age receive that pension. If the employee dies while still in service the widow or orphans receive half of the pension to which the deceased employee was entitled on the day of his death calculating on his length of membership and his age. The widow loses her right for pension in case of divorce or separation due exclusively to her fault and the marriage must have taken place at least three years before the separation from the service. If death was due to an accident while in service the above requirement of duration of marriage is waived or if at the time of separation there was a child born of that marriage.

The actual amount contributed by the employees of the railroads is equal to 12 or 15 per cent. of the total revenues. The railroad's share is 50 to 55 per cent and the remainder is from interest on funds and miscellaneous sources.

A general compulsory old age insurance law passed in France, in 1910 endeavored to embrace the entire uninsured field of employment. It, however, makes two forms of insurance—the compulsory and the optional. Under the compulsory system are included employees of both sexes, in all fields of industry, in commerce, in liberal professions, agriculture, domestic employees, state employees not covered by the provisions of the civil or military pensions, and employees of departments and communes. The exceptions, however, are employees whose individual earnings exceed 3,000 francs—that is, $579—or if the insured person's earnings exceed that amount his name is taken off the roster of the insured, although he does not thereby lose any of the rights acquired hitherto. There are also excepted the employees of state railroads, miners, and seamen, as has been described above, employees of the secondary railroad companies of general importance, of local railways and tramways are also excepted, if the provisions of these systems are not less favorable than those of the new law. Also existing old age pension systems for the benefit of state employees not subject to the general civil and military pensions may be preserved and similar systems created. This is also true of the departmental and communal employees. This law, therefore, of 1910 endeavored to protect all employees that had not hitherto been covered.

The optional system of this law is extended to share tenants of agricultural land, cash tenants, independent farmers, artisans and small employers of labor, thus including agriculture and the lower middle classes. It is also extended to employees whose annual earnings were over $579 and not over $965 and to wives and widows of persons insured, either by obligation or voluntarily, under the law. The compulsory contributions and the optional contributions of the insured and the compulsory contributions of the employers and subsidies from the state form the revenue for this insurance. The amounts contributed by insured employees are $1.74 a year for the adult male and $1.16 for the adult female and 87 cents for minors under 18 years of age. If the employee can prove that he is already a member of the Mutual Benefit Society or of a Provident Society paying old age benefits, or that he has purchased or contracted for the erection of a dwelling for himself and family or for the purchase of a small piece of landed property, then he is allowed by this law to continue to apply his personal contributions under this law to the same object without in any way disqualifying him from obtaining the employer's share of such subsidy. The employer must pay an equal amount as the employee, and this, of course, must be borne exclusively by the employer. Foreign workmen residing in France are included under this law, but the contributions of the employers are not accorded to them unless by international agreement similar privileges are granted to French workmen in each country. In absence of such treaty, employers' contributions are paid into the reserve fund. The subsidy granted by the state is a life annuity, beginning, normally, at the age of 65 and amounting to $11.58 a year. The waiting time for the insured is at least thirty years. If the number of payments is less than thirty but over fifteen, the government subsidy is computed at the rate of 1½ francs or 29 cents, for each paid up year. The two years compulsory military service are counted in as paid up insurance. This old age insurance is assumed to be on the alienated capital plan—that is, without requiring the reimbursement of premiums paid in case of death. The insured, however, have the option to change this to the reserve capital plan in so far as his own contributions are concerned—that is, these shall be paid to his heirs in case of his death, but this does not apply to the contributions of the employers.

NORMAL AGE OF RETIREMENT

The normal age of retirement is 65 years, which is five years earlier than the German or English standard and a reduction of five years from the former French compulsory law.

In calculating the actual value of the pension, it naturally depends on the age, sex and other actuarial considerations except the definite subsidy of the state fixed by law. The law permits the existence of many different insurance institutions and there may be considerable difference between the results obtained as between one fund and another. All this, however, is under the approval of the Minister of Labor and the Minister of Finance, which probably prevents too great a variation of individual pensions This law definitely prescribes that the charges for the cost of administration shall not be loaded on the computed rate These are met by special contribution from the reserve fund amounting to 19 cents per each insured person and 5 per cent of the sums collected by the various old age insurance agencies to cover the collection and transmission of the funds If this is insufficient, a special appropriation in the budget to the Minister of Labor must be made This amounts to an additional subsidy from the government to the system of old age insurance At any time between the ages of 55 and 65 an insured person may demand a liquidation of his pension, but its amount is correspondingly reduced and a corresponding reduction is also made in the amount of the state subsidy The law further provides that when the pension which is to mature at the normal age of 65 exceeds $34 74, or 180 francs, the insured person may at any time, after a successful medical examination, obtain the cash value of the additional pension, provided he is to use it for one of the following purposes life insurance or the purchase of land or a home

The invalidity insurance of the Act occurs under the possibility of anticipatory liquidation of the pension—that is, to persons suffering from total and permanent disability due either to grave injuries or other invalidity, without fault of their own, if they are not covered by the provisions of the accident law, immediate liquidation of their pensions is possible no matter what their ages They are also entitled to a special invalidity subsidy, the actual amount of which is not finally settled by law Only the maximum limits are stated in the Acts The state subsidy shall not in these cases exceed $11 58 per annum nor shall it increase the pension more than three times the amount liquidated on actuarial principles nor make it more than $69 48 per annum, including this subsidy

DEATH BENEFITS

The death benefit under this law is paid in the following manner and only in case of death, before the liquidation of the pension, not in case of the death of the pensioner If the widow survives without children under 16 she is entitled to receive $9 65 a month for three months If one child under 16 survives, $9 65 is paid for four months, if two children under 16 survive, the same monthly benefit is paid for five months, and if three or more children survive, the same amount is paid for six months The death benefit thus varies between $28 90 and $57 90

ADMINISTRATION OF OLD AGE PROTECTION

The situation, of course, had to be faced that a certain number of persons would be beyond the age that would enable them to pay the full number of years' contributions before they came to 65 years of age That is, for all those who were 35 years of age or over when the law went into effect, the requirement of 30 annual payments before they had earned the state subsidy of $11 38 was waived Only as many annual payments are required as the number of years lapsing from the time the law went into effect until the pension is due It was required, however, to show proof that for at least three years before the law went into effect these persons had belonged to the class of persons covered by the law

To persons over 45 years of age at the time the law went
into effect, the above privilege was not thought sufficient as
they had only twenty years or less in which to caluculate
the basis of their pension Therefore, in these cases, the
subsidy of the state was increased That is, at 45 years
instead of $11 58, $11 97 was granted and with steadily
increasing amount for each year, until at 64 years the subsidy
was 100 francs instead of 60, or $19.30 instead of $11 58 All
persons over 70 years of age had been cared for by the
Compulsory Old Age Relief Act of 1905, leaving only those
persons between 65 and 69 between the two systems of 1905
and 1910 These, by special provision, had the benefits of the
law of 1905 extended to them but limited to one half the
normal relief under this law, the maximum relief for these
cases being put at $19 30 a year

The duty of collecting the contributions of employees under the law is placed on the employer The employees are provided with annual stamp cards and the employer must, on each day, paste sufficient stamps representing the combined value of his own and the employees' contributions The insured person is permitted to paste stamps representing optional contributions Under the voluntary insurance of this law the persons here insured belong to the classes having no employers and therefore they do not receive the benefits of the employers' contributions, the pensions being made up, therefore, by their own contributions and the state subsidy An exception, however, is made in the case of share tenants in which case the proprietor of the land is required to contribute an equal amount There is a certain latitude in the amount allowed in the voluntary contributions for cash tenants, independent farmers, artisans and small employers, the payments must not be less than $1 74 nor more than $3 47 a year For share tenants the annual payment must not be less than $1 16 a year and an amount equal to their contribution, but not exceeding $1 74 a year, must be paid by the proprietor The state subsidy is computed differently than under the compulsory form of insurance. Instead of a definite pension after maturity being given, an annual increase to the account of the individual is provided for which must equal one third of the payments made, to be paid in in the form of alienated capital The same limit of $11 58 is provided, however, and after the pension values of all increases made by the state amount to that sum, further subsides are not granted During the transition period, persons voluntarily insured must be over 40 years old to enjoy the special privileges

Independent farmers, artisans and small employers over 40 years of age at the time the law goes into effect are to receive supplemental subsides which shall be equal to the pension purchasable by annual payments of $1 74 As a rule, in compulsory insurance, when the payments expected cannot be paid in full, the subsidy is correspondingly increased According to a complicated provision, the voluntarily insured of the farmers, artisans and small employers, who are 40 years old or more when the law went into effect, belonging thus to the transitory period, by paying 38 francs a year, or $3 48, which equals the amount the workmen have to their credit, including their own and their employers' contributions, may thus obtain the benefits of the special schedule of subsidies as given above, as beginning at 45 years and increasing steadily up to 65 years of age It is possible in this law to change from the compulsory to the voluntary class and the subsidy to which the person is entitled may be increased by his voluntary insurance, although not above the limit established by the compulsory form

Luxemburg has an old age insurance which follows closely on the German plan Roumania, Sweden and the Netherlands are the other countries in Europe which have attempted to solve the old age problem by the compulsory method in recent years, although in 1885 Italy had an old age insurance scheme in railroading, and Russia in 1888, protected the railroad employees by the same method The other countries of Europe have endeavored to solve the old age problem by, first, voluntary subsidized methods of insurance which, in France and Belgium, were administered through a national bank with a state guarantee In both countries this brought about an abundant protection of the thrifty middle class of small incomes and some of the best paid working classes, but it did not by any means cover the distress of the workers who really needed the most protection They could not be induced by voluntary contributions to store up from their meager pay enough to sustain their old age Even
among those that endeavored to do so, many ceased to con
tribute after a certain length of time and even those who
continued, only enough was contributed to make certain to
acquire the state subsidies It seems that the workmen are
forced to reduce the amount of the old age pension in order
to protect the health of their families in every day life and
even those that acquire pensions, they are found to be dis
tressingly small in amount. These facts remain true even
though, as in the case of Belgium, the insurance wa

more and more heavily subsidized by the state The failure, therefore, of the voluntary subsidized plan of insurance, both in Belgium and France, led France, in 1905, to give the compulsory old age insurance equivalent to certain outdoor relief to persons 70 years old, and five years later to have the general compulsory *old age insurance* as has been described

Voluntary old age insurance and its results and possibilities are best seen in France and Belgium In France this idea has been under consideration since the first Republican Assembly, in 1794, passed a decree creating a system of investments and insurance against old age and sickness This, however, did not continue long It was not until 1850 that the Old Age Retirement Fund was finally passed This fund was designed to offer an opportunity to all working people to save some of their earnings and to enjoy the full benefit of the principal and interest in the form of old age pensions The capital of the fund is described as consisting of voluntary deposits of 5 francs—that is, 96 5 cents—or multiples thereof, made by persons over three years of age and continued until death or retirement. The amount and frequency of these deposits, within certain limits, were left entirely to the option of the depositor The age of retirement was fixed at from 50 to 60 years, according to the option of the depositor, earlier retirement being permitted in cases of disability

Choice between two kinds of insurance was given One was on the alienated capital plan of an annuity when he reached the age of *retirement*, but *no other claim* on the amount deposited The other was the reserve capital plan by which the insured not only received the annuity but his heirs, in case of death, received the amount actually deposited, without interest This fund was open to all and therefore attracted a large proportion of persons who were not of the working classes There was no limit placed on the amount of deposits that could be made in any one year The interest rate on which the pensions were calculated was 5 per cent and the maximum pension for which deposits could be made was $115 80 This was an excellent opportunity for many small trades people and small capitalists to make a profitable investment, and for the first two years of its existence the fund was flooded with deposits of this character Two years later the rate of interest was reduced to 4 5 per cent and the amount of deposit to $386 within one year to the credit of any one individual Finally, ten years later, the annual deposits were increased to $772 and the maximum purchasable pension to $289.50 It was finally realized that while the operations of the funds were considerable, they appealed mainly to government employees, railroad employees and small property holders and that it did not appeal to the wage earners, *for neither the minimum deposit of 96 5 cents nor the maximum of $772* was in harmony with their interests In 1886 the minimum deposit was reduced to 19 3 cents and saving cards were introduced, which made very small deposits possible by means of postage stamps The maximum amount to be deposited in one year was reduced from $772 to $193, and the maximum pension was reduced to $231 60 The legal rate of interest necessary to pay was changed to 4 per cent and finally down to 3.5 per cent

The Act of 1886 also provided for subsidies in case the pensions liquidated before the age of 50 because of old age or infirmities leading to invalidity, but this remained a dead letter practically until 1891 and even then the appropriations of that year amounted to only $7,720 for this purpose It was not, however, until 1895 that a fund was formed from the sale of the crown jewels that these invalidity subsides actually acquired importance. These new subsidies to old age pensions were not confined only to the depositors of the National Old Age Retirement Fund, but were extended to members of mutual benefit societies or other voluntary associations granting retirement pensions The subsidies under this law are granted only to persons who do not have any income exceeding $69 48 and who have been contributing either to the National Retirement Fund or any other organization granting old age pensions for twenty-five years, not necessarily consecutively During the transitory period, which expired in 1905 this period of twenty-five years was reduced pro rata and the retiring age was settled at 65 This National Old Age Retirement Fund also possesses the function of receiving from employers of labor or from their insurers lump sum payments of capital sufficient to provide for payment of pensions due employees or their dependents on account of industrial accidents, as provided in the Workmen's Compensation Law of 1898. Deposits may be made in favor of any person over 3 years of age living in France, whether citizen or foreigner Minors under 16 years of age require authorization by the father, mother or guardian or, in their absence or in case of their prevention, by a justice of the peace Married women may make deposits without consent of their husbands and regardless of the terms of the marriage contract Payments made before marriage remain to the credit of the person who made them All deposits made during marriage by either party are credited to both husband and wife, each receiving half, even when one of the parties has entered on the enjoyment of a pension Neither party can deprive the other of this benefit nor renounce the share of the deposit in favor of the other Deposits made by intermediaries must state specifically whether the capital should be alienated or reserved When the first payment is made by a depositor, this depositor must declare whether the capital is to be alienated or reserved In any case all moneys revert to the retirement fund if unclaimed within thirty years after the death of the depositor or if there are no legal heirs Future deposits may also be changed from alienation to reserve, or vice versa Moreover, if a depositor has contracted for reserve capital insurance, he may at any time alienate any or part of such capital in order to augment his pension A third party who deposits money as reserve capital to constitute a pension for another must indicate whether or not the beneficiary shall have the privilege of alienating such capital in order to increase his pension A person entitled to an old age pension to begin before he is 65 years of age may, in the three months preceding the payment of the pension payments, postpone the time of beginning in order to increase the pension, not, however, beyond the legal maximum limit. The annual pension which any one person may receive can not be less than 38 6 cents nor greater than $261 60 In case of injury or illness completely disabling the person from earning a living, the pension may be liquidated before the age of 50 and the amount of the pension is correspondingly reduced Such premature pensions may be augmented by an amount to be fixed by a superior commission in no case, however, to exceed $69 48 The following table shows the amounts of annual pension payable for deposit of $100 by age of depositor and plan of insurance

AMOUNT OF ANNUAL PENSION PAYABLE FOR THE DEPOSIT OF $100 WITH THE NATIONAL OLD-AGE RETIREMENT FUND, BY AGE OF DEPOSITOR AND PLAN OF INSURANCE

Age of Depositor	Amount of Annual Pension Payable for the Deposit of $100							
	Alienated Capital Plan				Reserved Capital Plan			
	Age at Which Pension Begins				Age at Which Pension Begins			
	50 Years	55 Years	60 Years	65 Years	50 Years	55 Years	60 Years	65 Years
4 years	$51.22	$74 66	$114 77	$190 32	$41.15	$59.98	$92.21	$159 91
5 years	47 15	68 73	105 66	175 22	37 72	54.99	84.53	140 17
10 years	38 95	56 77	87.27	144 72	30.25	44 09	67 79	112 41
15 years	32 15	46 86	72 05	119 47	24 07	35 08	53 93	89 43
20 years	26 18	38 10	58.66	97.27	18.99	27 68	42.56	70 58
25 years	21 16	30 84	47 41	78 62	14.88	21 69	33 35	55.30
30 years	17 15	24.99	38 42	63.71	11 55	16.84	25.89	42 93
35 years	13.89	20.24	31 12	51 61	8.86	12.91	19.85	32 91
40 years	11.22	16.35	25 18	41 67	6 68	9 78	14 96	24.80
45 years	9 00	13 11	20.16	33.42	4 92	7.17	11 02	18 29
50 years	7 13	10 40	15.98	26.50	3.52	5 12	7.88	13 06
55 years		8 05	12.87	20 51		3.52	5 41	8.07
60 years			9.21	15 43			3.53	5.85
65 years				11 13				3 53

ILLUSTRATIONS

The following illustrations show the practical operation of the old age pension fund

A depositor, aged 35 years, contributing $100 as alienated capital, would receive at the age of 60 years an annual pension of $31.12. If at the age of 40 years he again contributes $100 his pension at the age of 60 years would be $25.13 for that contribution which, added to the other amount, would make a total annual pension on account of the two payments of $56.25.

If a depositor contributed at the age of 35 years $100 as reserved capital he would receive at the age of 60 years an annual pension of $19.85 and on his death his heirs would receive $100.

From 1851 to 1898 practically 60 per cent. of deposits were made by men and 40 per cent. by women. For the entire period of 1851 to 1911 there were practically 40,900,000 deposits made under the alienated capital plan and 35,300,000 under the reserve capital plan. The statistics of the fund further show that only about 3 per cent. of the entire funds deposited were made by individuals, 97 per cent. being made by the collective funds of mutual benefit associations and savings societies of all sorts—that is, the collective deposits. As is pointed out in the report of the Industrial Commission of Wisconsin, this National Old Age Retirement Fund of France offers insurance at less than cost, collects premiums in a manner and in amounts most convenient to wage workers, allows a wide range of choice as to policy and date of maturity and makes use of all existing agencies for collective or old age insurance. Nevertheless, from 1851 to 1883 only 640,000 persons opened accounts in the funds, an average of 19,000 a year out of a population of 35,000,000. Of these depositors only one half, that is, 52.6 per cent., were wage earners. Of these wage earners one half were railway employees, insured by the railway management without volition of their own. In thirty-three years barely 160,000 workmen were voluntarily insured. In 1911, after sixty years of operation, despite a government subsidy, only 3 per cent. of the wage earners of France had voluntarily availed themselves of the fund, and while the number of pensions in force from 1895 to 1911 gradually rose, the average amount of pensions fell from $34.48 in 1891 to $25.09 in 1911. It is still true that in spite of the government subsidies, one half the pensions are under $10 and nearly 87.4 per cent. are under $40 per year. Thus the voluntary old age insurance of France shows that voluntarily the workmen will not or cannot insure. Certain it is, they do not, and the vast majority of those that do insure are insured under other mutual aid societies as collective depositors, that is, practically under an involuntary compulsion. In Belgium, before the war, voluntary old age insurance succeeded about the same as in France. The general savings and retirement fund date practically from the same year—1851—and are based on the same general plan. After forty years' operation the total number of accounts in the fund was about 10,000. A liberal subsidy was offered in 1890 and the number of insured then rose in 1899 to 169,000. In 1900 the subsidy was increased to 60 per cent. of the deposit, made up to a total of $2.90 a year, which practically amounts to 40 cents on every dollar of premium, and under this stimulus about 1,500,000 were insured. The failure adequately to provide for old age in Belgium by any voluntary scheme even under heavy subsidies was so discouraging that just previous to the outbreak of the present war Belgium was about to inaugurate a system of compulsory insurance.

THE CANADIAN LAW

Another voluntary state insurance is that of Canada, passed in 1908.[8] This law provides that the minister of trade and commerce may make contracts with any person domiciled in Canada for the sale of the immediate or deferred annuity depending on a single life or partly depending on a single life and partly, for a term of years or dependent on the joint continuance of two lives. The minimum amount of annuity is $50 and the maximum $600. No annuity is to be paid prior to the age of 55 years. Various kinds of annuities are offered, mainly in two groups, the reserve capital and the alienated capital plans. In the reserve capital, in the event of the death of the purchaser before the first payment of the annuity falls due, the total amount which has been put in, with 3 per cent. compound interest, is refunded to the heirs. Under the alienated capital plan there is no return to the heirs in the event of death before annuity is due, and the payment is correspondingly much larger. In each group there are three forms of payment: the weekly payment, the yearly payment and the single payment. Premiums may be paid to the department direct or to the postmaster or any money order office, and the postmaster is allowed a commission of one third of 1 per cent. of all amounts paid in. An annuity may be purchased by or for any person between the ages of 5 and 85 years and no annuity may be paid before the annuitant reaches the age of 55. The rights of the annuitant are not saleable or transferable except to the extent that a purchaser may have a portion of his annuity, not exceeding one half, payable to his wife. Organizers and lecturers have been employed to advertise the scheme and to bring it to the general attention of the working people and their employers. It is said that so far it appears to have met with moderate success.

So far we have considered in old age relief those forms in which the workman helps in some manner toward the contribution either by contributing directly part of the funds under compulsion or voluntarily investing in investments which will surely bring him a pension in his old age, or voluntarily purchasing an annuity, as in Canada. In all these schemes, besides the voluntary contribution of the worker, the state has duly contributed its part, not with any idea of pauperization of the workman, not as a matter of poor fund relief to the pauper or of care to the indigent and crippled sick, as expenses of state and city hospitals may be considered, but as a willingness to give help to those who are willing to help themselves and as a reward for labor done. It has been considered justifiable subsidies of some form, either as direct sums, as in Germany or France, or as subsidies as in Belgium and some portions of the French law, or as a direct increased gift by paying for the administration of invalidity and old age schemes. Whether it was regarded as a reward or as an endeavor of the state to relieve itself of its responsibilities for the care of the indigent poor, it has been considered a justifiable expenditure of the state.

These schemes so far considered, moreover, also have some form of the insurance principle in them of paying small premiums over a long period which placed at compound interest produce, at a certain time, a much increased return, or that the small amounts paid in by many members of a large group may furnish at any time a relatively large amount which the needy person could not obtain by his own single efforts. In private life it has been universally considered as a just and fair reward for labor done that without any contribution on the part of the worker he should have, at the end of his years of work, a pension toward which he has not at all contributed. He has given faithful service and helped produce wealth by his work and can therefore accept the reward of a pension in his old age. Oddly enough, the same citizens in the country who willingly give this in private establishment funds, condemn the same plan when universally applied to the state and condemn the practice that a state should give to the citizens who, on reaching old age, are unable further to support themselves and who, through the years of their earning power, have been unable to store up from their daily needs any amount, however small, to tide them over their years of unproductive, wornout old age. State pensions have been always looked on as too paternalistic and too socialistic to be advisable.

Of course we have seen even in those countries where insurance schemes have been put in operation the transition stage between the beginning of the operation of the law and the final fulfilment when all are equally working under the law and all the youths have grown up to pay the full number of their contributing years. There must be a transition period in which those already aged, when the law goes into effect, must practically receive some old age pension or some form of it when they reach their years of industrial uselessness. Therefore, the immediate problem of any insurance scheme must be some form of old age pension Many countries have frankly met the issue and deemed it wiser to recognize that a straight out and out old age pension ties up less funds, for the funds necessary are, each year, easily obtained by taxation and that really in the end it simplifies what is often a very complicated problem There is no transitional stage between the passing and the fulfilment of an insurance law Although it took fifty years or more for these ideas to be realized in Great Britain, even in that democratic state the old age pension law was passed in 1908 In 1891 Denmark also passed such a law and New Zealand in 1898 The Australian colonies of Victoria and New South Wales, and finally the combined Australian commonwealth also accepted the ideas of old age pensions These English colonies have accepted it even more generously than their mother country New Zealand and New South Wales state that "Whereas, it is equitable that deserving persons who during the term of life have helped to bear the public burden of the commonwealth by the payment of taxes and by opening up its resources by their labor and skill, should receive from the colony pensions in their old age" Victoria, following New South Wales a year later, makes the declaration that Whereas, it is the duty of the state to make provision for its aged and helpless poor,' etc, and the commonwealth of Australia passed the act on the recommendation of the commission that the old age pensions should be granted as a right, not as a charity Thus it has been starting from the time that the pensions were really considered as a relief of the poor they have finally come to be considered as a reward for labor done and that a man is entitled to support without being classed as a pauper, without losing his rights as a citizen, and without losing right of caste which poor relief carries with it. There is no question that this was the point of view taken in Denmark when that country passed its pension law for its old age relief, for the official title of the Danish law reads 'Law concerning old age support for the worthy poor aside from poor relief."

---

[8] Massachusetts Commission on Old Age Pensions.

DENMARK

The old age pensions of Denmark are practically a scheme of outdoor relief for the deserving aged poor and the pensionable age is 60 years and persons over 60 years of age at the time the law went into effect were not disqualified on account of having previously received poor relief, provided that relief began after the sixtieth year The amount of relief is not definitely fixed The local authorities have the power to decide the nature and amount of the assistance to be given in each case the law simply stating that the relief must be sufficient for the support of the person relieved and for his family, and for their treatment in case of sickness

The relief may be given in money or in kind that is, it may consist of a free admission into a suitable asylum or other establishment intended for that purpose, or, in the city of Copenhagen it is generally given in the form of money But in the country where the recipients are more often known personally to the authorities it is usually given in the form of fuel food or rent. The amount given in cash usually amounts to a minimum of $12 50 and a maximum of $50 a year The expenses are borne equally by the communes and the state the state treasury reimbursing the communes one half of the total amount paid out by them at the end of each year It was noticeable up to 1908 that the number of recipients of the old age relief had increased rapidly at the rate of 4 to 5 per cent annually while the population had only grown at the rate of 0.5 to 1 per cent. and the expenditure had risen in even greater proportion When the old age relief system was established, it was expected the cost of poor relief would decrease if not proportionately to the advance of old age relief These expectations were realized for a few years, but since 1896 that is, five years after the system was established, the amount for poor relief has steadily increased Whether this is from increased numbers or increased care is not stated This old age relief is not given indiscriminately but there are numerous conditions of eligibility An applicant must be of good character, not having done anything generally counted dishonorable he must be unable to provide the necessities of life, his poverty must not be due to his own fault, he must have ten years' fixed residence, he must not have faced sentence for begging or vagrancy and must not have received poor relief

GREAT BRITAIN

In Great Britain, after fifty years discussion, it was finally decided to grant payment of weekly pensions not exceeding $1 25 to persons over 70 years of age, except wastrels, lunatics, paupers and criminals, whose income from all sources does not exceed $157 50 a year The rate of pension per week is as follows Those whose incomes do not exceed $105 receive 5s, those exceeding $105 and not exeeding $115 12 received 4s, those who exceed $115 12 and do not exceed $131.25 receive 3s, those who do exceed $131.25 but do not exceed $143 37 receive 2s, those who do exceed $143 37 but do not exceed $157 50 receive 1s Those who receive over $157 50, as stated above, receive no pension

Besides being 70 years old and a British subject, there are other qualifications which are definitely stated in the law One thing that is definitely stated is that a person of 60 years and upward who has been convicted under an inebriate act may not necessarily be disqualified But the court may decree such a person disqualified for a period not exceeding ten years It is a noticeable thing in England that the total number of pensioners under this act, in 1911, exceeded the calculations by about 270 000 and the expeditures were about $10,000,000 more than the original calculations The great difficulty of accuracy of calculations seems to have been due to the inability to determine, according to law, the thrift and income and age tests The following table gives the total number of pensioners in England and the value of the pension each year A sudden increase in 1910 and 1911 is due to a lapse on Dec 31, 1910 of the principal poor law relief disqualification In these numbers in 1913, 37 5 per cent. were men and 62 5 per cent were women This proportion is most marked in the urban areas In Ireland the ratio is 42.3 per cent men and 57.7 per cent women, and in London the proportation was 30 7 and 69.3 per cent, respectively Another disproportion is shown in England and Wales Men form 48.3 per cent of the total population and women 51 7 per cent In the population over seventy men are 41 4 per cent. and women 58 6 per cent. The sex ratio among the pensioners over 70 is men 36 7 per cent and women 63 3 per cent Women seem to survive longer than men but many are widows and are left unprovided for In the English colonies the New Zealand age limit is 65 years and the maximum pension is 10s or $2.50, a week. There are certain definite restrictions and each pension is granted for twelve months and a new application must be made for renewal The pensioner must apply at the local postoffice personally where the pension is payable monthly The effect of the Pension Act on the poor relief has reduced somewhat the amount spent on outdoor relief, but the expediture on indoor relief has increased considerably, so that the sum total is an increase In New South Wales they followed closely the New Zealand system They granted $130 00 a year The Australian system which superseded the separate system of New South Wales Victoria, Queensland, etc., provides for the grant of pension not to exceed the sum of $130 at the age of 65 to persons whose incomes from all sources do not exceed $260 per annum It is also provided that women may receive an old age pension by proclamation of the governor-general at the age of 60 years Certain aliens and other disqualifications are mentioned Pensions may be withdrawn at the discretion of the registrar from persons who misspend their income or otherwise show themselves unfit for the further enjoyment

	Number	Value in Terms per Annum
1908-1909	647 494	$40,375 553
1909-1910	699,352	43 882,332
1910-1911	907 461	57 447,234
1911-1912	942 160	59 907,588
1912-1913	967,921	61 575,306

of a pension In case a pensioner becomes an inmate of an insane asylum or a benevolent home, the pension is suspended during the time he remains in the institution If a pensioner leaves Australia permanently, the pension is forfeited

There is a special section of the Act making provision for invalidity pensions This, however, does not become effective until so ordered by proclamation, and the disqualifications and requirements for the receipt of the invalidity pension are similar to those laid down for old age pension To obtain such a pension, claim must be made to the registrar in the district It is then referred to a magistrate who can recommend to accept or reject the claim, and after this the registrar refers it to the deputy commissioner of the district who may or may not grant the pension

It is a noticeable feature that in all voluntary or compulsory insurance schemes for the care of old age and invalidity, mention has also been made of an endeavor to provide for the widow and orphans of the insured, if his death takes place earlier than is expected in the natural calculations of life This insurance of widows and orphans runs very noticeably through the establishment funds and through the private schemes in this country In the old age insurance, already described in France and Germany, the details providing for widows and orphans and the percentage of the pensions which they have received have been given in full for the sake of bringing out this feature Rubinow draws attention to the fact that from the beginning consideration of the necessity of surviving dependents was shown in both France and Germany in the discussion of their old age protection When the old age insurance bill in Germany, in 1887-1888, was under discussion, substantial provision for the widow and orphan did not seem feasible, but a provision was made which returned to the widow and orphans the contributions made by the workman if he died before receiving a pension In France, during the twenty years before the old age law of 1910 was adopted, life insurance for those surviving was always seriously taken into consideration, in fact some schemes proposed making it a matter of choice whether old age pension or life insurance should be taken This is further shown in the plan adopted in which there was finally put an option between alienated and reserve capital plans That is, as has been already shown, while the alienated capital gave the bigger pension the reserve capital gave a measure of insurance to the surviving widow and orphans and the possibility that even in the deposit made under alienated plan, even when once this plan was chosen, all future deposits could be designed either as alienated or reserved In the French old age insurance it is further permitted that death benefits shall be paid to the survivors, according to the size of the family These are not large, they vary between $29 and $59 and are payable in monthly instalments of 50 francs, or $9 50, and the number of instalments vary from three to six To Germany, however, belongs the credit of having, in 1911, brought out the only real national system of widows' and orphans' pensions This, as all other insurance in Germany, is compulsory This insurance was brought about by increasing the contribution of the employer and employees in the old age and invalidity insurance rates That is, in the five classes, the lowest total increase was one-half cent and in the highest 2.8 cents, and as half of this contribution falls to the employer, the workman paid for obtaining the widow and orphan pension from one fourth of a cent to 1 5 cents more a week than he had already done The increase amounts in the lowest class I to one-half cent, class II, 0 9 of a cent, class III, 1 9 cents, class IV, 2 5 cents, and class V, 2 8 cents This did not seem to be too great a burden for the results obtained

The amount of the widows' and orphans' pensions[9] depends on the amount of the invalidity pensions which the deceased was receiving or would have been receiving at the time The widow receives 30 per cent of that pension Orphans' pensions are given to children under 15 only, and for the first surviving child 15 per cent is given but only 2 5 per cent. to the other children In addition, the widow is entitled to an annual subsidy of $12 50 from the state treasury and each child $6.25 While these pensions are not large, they compare favorably with the rate of the invalidity pensions, as the average invalidity pension amounts to about $40, the widow's pensions to about half this sum, and the family's pension to about as much as the whole pension, that is, with a normal family of three children. Of course, such small pensions as these do not solve the problem of the widows and orphans and, like most all of the amounts given above, they prevent starvation but are not enough to live on. We shall go into a fuller discussion of this in considering the relation of the social insurance laws to the reduction of poverty and the reduction of the poor funds—that is, in considering their social results and their relation to poverty

UNITED STATES

In the United States there has grown up quite an extensive series of pensions to widows and orphans given under the name "Mothers' Pensions" Illinois, in 1911, was the first state to pass such an act Missouri also followed that same year, California and Colorado in 1912, and in 1913, Idaho, Iowa, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Utah, Washington and Wisconsin followed suit New York a year or two later also passed a mothers' pension act. Besides these states, two municipalities, those of Milwaukee and St Louis, have established similar systems independently of state action The two foreign countries which have passed these mothers' pensions are New Zealand and Denmark, in which the pensions are granted to widows only in each case on account of their children In many of the American acts children are included whose fathers may be alive but disabled or whose fathers may have abandoned them, but the main mass of the pension in all the acts goes to the widow, as it should These acts are an endeavor to keep the family together, with the mother herself at home with the children and not place them as wards on the state Evidence, therefore, is required not only that the family is in need, but that it also is worthy of preservation. When these conditions are properly certified to proper officers, the allowances may be granted in some states by the courts, as in Illinois, by special committees in others, as in Pennsylvania The amounts in most states are fairly liberal $15 for one child, $7 for each additional child under 16 in Illinois, $12 for one child, $20 for two and $5 for each additional child in Pennsylvania In Denmark the amounts paid to widows out of public funds, without drawing on the Poor Law, for the purpose of maintaining and educating their children, are about $27 for each child under 2 years, about $20 for each child from 2 to 12 years, and about $16 60 for each child from 13 to 14 years old These mothers' pensions are still further removed from the insurance idea than the old age pensions, for the old age pension is given mechanically when the person arrives at a certain degree of invalidity due to old age or to a certain definite number of years of life, but in the case of mothers' pensions there is connected with it the necessity of investigation and certification of moral worth which brings it as a connecting link really between life insurance for the death of the worker on the one hand and public relief funds on the other

No study of social insurance is complete without consideration of unemployment and the methods taken in Germany and other countries to diminish it, and the national attempt in England not only to diminish it, but also to provide against its result by an unemployment insurance It is impossible to understand the effect of these various laws of social insurance unless we appreciate their relations to unemployment, and it is impossible to grasp the industrial situation without a realization of what unemployment is and what it means to the wage earner To the majority of people unemployment among wage earners is looked on as the occurrence of a misfortune or a hard luck accident for which, in all probability, the wage earner is more or less responsible and to blame While this may be true in certain instances, unemployment in the great mass of instances is a fault of industry, not of the individual The responsibility is industrial, not personal Unemployment is a normal recurrent condition of a large percentage of wage earners By unemployment is meant involuntary lack of work Nearing defines it as involuntary idleness during ordinary work time

---

[9] Rubinow, I M "Social Insurance"

In considering unemployment here we will rule out the consideration of that form of disability due to sickness, accidents or old age and consider simply the lack of work of the able-bodied when they are able and anxious to perform their daily task and earn their living thereby Uncertainty of employment is a never ceasing dread which haunts all wage earners Nearing, in his study of wages, claims that 20 per cent. must be deducted from the yearly total of wage earners for unemployment Others claim that at least one fourth must be so deducted It is only in the highest skilled trades with the strongest labor unions that wages have been raised sufficiently to tide over these periods of lack of work In[10] the United States about 10 per cent. belong to the unions, in Great Britain about 17 per cent, and in Germany about 18 per cent. Not a large percentage of the wage earners are protected by a sufficiently high wage to enable them to stand without suffering, without the danger of changing poverty into absolute destitution, even the average amount of unemployment in the ordinary busy year of good times When hard times come and the percentage of unemployment is high and the period of unemployment is long drawn out, destitution overtakes many hard working, honest wage earners eager for the opportunity to earn their living Of course, insurance against unemployment will not cure, nor does it pretend to cure the causes which bring unemployment It can, however, as all insurance does, protect in a certain measure the individual against the calamity when it occurs, for by our definition of insurance previously given in these reports, insurance is a scheme by which a large group of men by giving a relatively small contribution protect themselves against a given calamity by receiving, when that calamity comes, sufficient to tide them over its effects, all of the group realizing that the calamity must come to some and no one knows to whom it will come in any given year

At the hearings before the Committee on Labor of the House of Representatives, Sixty-Fourth Congress 1916 Miss Poyntz showed that unemployment is a problem of greater proportions in America than in other countries and yet this country is the last one to study it or to take measures to control it When the need is great and the demand for something to be done to relieve the effect of unemployment, large charitable endeavors are instituted and some form of public works considered by which the stress may be relieved As soon however, as industrial conditions improve everything is dropped and nothing further is done until either the next season brings with it its regular quota of unemployment or some cyclic occurrence of hard times again occurs forcing a repetition of the same charitable endeavors to solve a problem which the community should have been prepared to deal with for many years back It is said that the time is past when the problem of unemployment could be disposed of either by ignoring it as was the practice until recent years in America or by attributing it to mere laziness and inefficiency The causes of unemployment are social and inherent in the present method of industrial organization The problem is one due to industrial phenomena and is not a personal problem and any remedies to be of value must be industrial and not personal The unemployed are not the unemployable paupers The unemployed are the whole working classes the whole industrial army The essential characteristic of the modern workingman's life is insecurity Modern factory production is subject to constant fluctuations, often incalculable often severe always productive of unemployment for the workers The workingman is the victim of the situation When the factory shuts down the manufacturer takes care of the machinery shelters it oils it and protects it but nothing is systematically done to protect the living machinery by which the products of the factory are produced This portion is turned out of doors to fare as best it may If there be an industrial crisis there are no openings in other factories or in other industries and no work to be had Unemployment is due to the incapacity of industry to absorb the whole supply of labor at any given time, there is always some unemployment in prosperous years Under tremendous stress of good times, such as during the past year, the amount of unemployment is reduced to a very unusual minimum, but during the bad years of depression it rises to appalling proportions The permanent excess of supply over demand in the labor market is caused largely by the constant fluctuation of industry making it necessary to have reserves on which to call Hundreds of thousands more of workers are needed in good years than in bad years to operate our industries and many more are needed in the busy season than in the slack season Besides, in almost every business, there will be special calls for workers to be taken on for a few weeks and large reserves are needed for these casual demands To the reserves required for these three types of fluctuations in industry—periodic or irregular, seasonal and casual—must be added the surplus produced because of, first the inefficient handling of these reserves and the lack of means of transferring workers smoothly and rapidly from job to job, second, the temporary displacement of workers by new machinery, third, the lack of adaptability due to old age or mental or physical weakness, fourth, the lack of industrial training either in youth or in adult life, fifth the overspecialization which confines the chances of employment to small subdivisions of industry and particular operations There is thus, at all times and all seasons, a fringe of workers in reserve standing around each industry and often each separate business in wait for the chance of a demand for their particular kind of labor

NUMBERS EMPLOYED IN ALL INDUSTRIES
(Average number employed 575 103—100%)

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec.	Aver
1908	83 6	82 7	81.9	80.5	80 0	80 5	80 0	81.3	85 4	88 1	88.4	87.9	83 5
1909	98 4	99 5	103.3	100 0	100 0	100 0	99.5	101 0	103 2	104 6	105 0	106 8	101 4
1910	101.5	102.6	102 6	101 8	100 9	98 6	98 6	97.8	98.5	100 0	101 4	101 6	100.2
1911	101 4	104 0	102 9	102 0	100 2	98.8	98 0	99 3	101 3	103 0	104 0	104 1	101.3
1912	103 0	102 6	104 7	104 1	104.9	105.2	103.9	104 1	106 5	108.8	109.8	110 0	105 6
1913	109.1	109.5	109 7	108 0	106 0	105 0	102.8	104 6	106 5	107.5	108 1	108 0	107.1
Aver	99.5	99 6	100.8	99 4	98 6	97.9	96 9	98 0	100 8	102 0	102.8	103 0	100 0

In every industry there is a seasonal fluctuation Every factory has a period of depression and a period of excessive output during the year There is constantly extensive seasonal unemployment and this is responsible for a great deal of the general lowering of the standard of living and for the uncertainty of the tenure in the workingman's job This seasonal rhythm between rush and idleness lies deep in the organization of industry in this country due to social habits, individual tastes and often directly due to the seasons of the year and the variation of the weather itself The weather really is more fundamentally a factor than is generally realized, for it interacts with the economic and social environment to such an extent that in many industries the causes of irregularity seem purely economic and social In others, the weather plays the predominant role and affects production directly, especially in the open air industries, such as building ship building, agriculture, brick making, quarrying, and outdoor unskilled work of all kinds In other industries, weather affects the consumption of the product rather than the production, and the demand becomes purely seasonal For instance the muddy weather of winter and early spring causes an enormous consumption of rubber shoes and the variation of a few inches of rainfall in a season will affect sales very materially It is said that an unusually cool summer recently spoiled the market for low shoes and brought about enormous sales at ruinous prices Heavy weight and light weight clothing the difference between the felt and the straw hat industries, are good examples of those affected by purely seasonal conditions The social season is no less important than the weather in its influence on industry Christmas, Easter and the summer vacation are as conspicuous mile stones in industrial as in social life They affect profoundly the buying habits of the consumer which, in turn, determine the current of industry and employment The Christmas season calls out the consuming energy of the public—the general curve of employment stands highest at this point. Business and social habits, purely customary in nature, are often responsible for seasonal irregularities This is particularly well seen among the publishing houses of school books and in the habit of laying in stock at certain times of the year Publishers estimate that the average bookseller does 70 per cent of his business in the last two months of the year

---

[10] Hearings before Committee on Labor 64th Congress 1916 p 157

Besides the seasonal variation, there come great cyclic depressions in trade and industry which are often world wide in their extent These come in periods of seven or eight or twelve years apart and the reasons for these are much in dispute Pigou,[11] in discussing it, lays stress on the cyclic influence from the variability of the harvests Good harvests bring confidence and continue a sense of prosperity and poor harvests the reverse In good times, when industry is active, the manufacturers are making good profits and reinvesting these by enlarging their industries, and bankers are willing to lend money and companies are formed with expansion of bonds and stocks As long as the confidence lasts, all will be well, and abundant harvests keep up this confidence, production flourishes, consumption is generally increased through good times the world over, and unemployment is at a minimum But whether it be due to a poor harvest or whether it be due to some other cause that begins to produce lack of confidence, credit is immediately contracted, a period of retrenchment begins Hard times cause a diminished production and consumption and there is produced a large mass of unemployment The situation is thus produced that during this period of depression factories are standing idle and people who want to work cannot and other people need things which are not being manufactured, and we are faced with the absurdity that factories must suspend work when there are on the one hand people who want to work to produce articles of commerce and, on the other hand, people who need these articles, but the former cannot work and the latter cannot buy The people need more clothes and the garment makers want to make them, farmers want to sell their produce and yet people in the larger cities are starving for want of food, shoe factories are standing idle when workmen are unemployed and children are going barefoot When capital loses its timidity and confidence in credit is restored, times improve, and again the cycle goes on from good to bad The preceding table and curve of numbers employed in the principal industries in Massachusetts show both the seasonal variation and the variation from bad times to good

The table of New York reports on employment in selected trade unions shows both seasonal and cyclic variations even better and shows, also, the high percentage in hard times, such as in 1908 [12]

Years	Month	Number of Unions Reporting	Aggregate Membership Reporting	Idle at End of Month	
				Aggregate Number	Per Cent
1901	December	188	97 270	18 593	19 1
1902	January	187	96,173	20,115	20 9
	February	187	97,126	18 148	18 7
	March	187	96,888	16,738	17 3
	April	187	98,740	15,099	15 3
	May	187	97,148	13 591	14 0
	June	187	98,020	14,247	14 5
	July	187	101,223	15,836	15 6
	August	185	101,281	7,148	7 1
	September	185	98,349	6,166	6 3
	October	185	97,951	10,966	11 2
	November	185	98,003	13,955	14 8
	December	185	99,063	22 036	22 2
1903	January	185	102,414	20,955	20 5
	February	184	101,226	18 060	17 8
	March	184	100 540	17,699	17 6
	April	184	98,574	17,071	17 3
	May	184	100,134	20,210	20 2
	June	184	100,484	23,216	23 1
	July	184	105,202	18,759	17.8
	August	184	104,445	16 101	15 4
	September	184	105,052	9,956	9 4
	October	184	101,159	11,802	11 7
	November	184	100,200	18 395	18 4
	December	184	100 879	23,301	23 1
1904	January	184	100,602	26,004	25 8
	February	182	104,074	22,460	21 6
	March	181	103,681	28 124	27 1
	April	182	95 501	16,198	17 0
	May	182	96 187	15,262	15.9
	June	180	96,476	13,263	13 7
	July	176	96,824	14,317	14.8
	August	189	96,772	13,231	13 7
	September	198	99 652	12 001	12.0
	October	199	98 167	10,620	10.8
	November	199	95,938	10 644	11 1
	December	199	96 075	18,847	19 6
1905	January	199	97,345	21,886	22,5
	February	198	96 641	18,748	19 4
	March	196	97,151	18,618	19 2
	April	193	91,013	10,825	11.8
	May	193	92 649	7,687	8.3
	June	191	93,729	8 557	9 1
	July	192	92,016	7,417	8 0
	August	192	93 800	6,789	7 2
	September	192	94,836	5 636	5 9
	October	192	91,088	5 079	5 6
	November	192	91,521	5,576	6 1
	December	192	91,767	10,223	11 1
1906	January	191	84,539	12,682	15 0
	February	190	85,155	13,031	15.3
	March	192	85,956	9,952	11 6
	April	192	90,352	6,583	7.3
	May	192	91,163	6 364	7 0
	June	192	92 100	5,801	6 3
	July	195	94,571	7 229	7 6
	August	195	94,220	5,462	5.8
	September	195	94,280	5,959	6.3
	October	195	92,062	6,383	6.9
	November	195	93 019	7,052	7 6
	December	195	93 318	14 352	15 4
1907	January	191	92,871	20 007	21.5
	February	191	92,797	18,653	20 1
	March	191	93,242	17,018	18.3
	April	191	94,402	9 563	10 1
	May	191	94 755	9,955	10 5
	June	191	95,840	7,809	8 1
	July	194	100,965	8,585	8.5
	August	193	100 025	12 135	12 1
	September	193	98,224	12,089	12.3
	October	194	99 121	18,296	18.5
	November	194	98 068	21,596	22 0
	December	194	97,732	31 917	32 7
1908	January	192	96 727	35 684	36.9
	February	192	95 696	35 924	37 5
	March	192	94,542	35,436	37 5
	April	192	94 148	31,056	33.0
	May	192	93 532	30 152	32.2
	June	192	92,814	28 013	30 2
	July	193	92 112	24,693	26.8
	August	193	90,872	22 389	24 6
	September	193	90,708	22,315	24 6
	October	193	89,275	20 031	23 1
	November	193	89,426	19,233	21 5
	December	193	88 746	24 870	28 0
1909	January	192	88,604	25 061	28 3
	February	192	89 896	23 727	26 5
	March	192	90,619	20,836	23 0
	April	192	89,039	18 042	20.3
	May	192	89 241	15 228	17 1
	June	192	89,227	15,503	17 4
	July	190	89 551	12,459	13 9
	August	190	90 429	10 793	11.9
	September	190	90,763	13 171	14.5
	October	100	91,247	12 463	13 7
	November..	190	91,977	12,206	13.3
	December	190	91 162	18,701	20 6
1910	January	193	90,998	22,253	24 5
	February	193	91 044	20 610	22 4
	March	193	95,288	21 524	22 6
	April	193	96,074	15,413	16 0
	May	193	97,358	14,121	14 5
	June	193	100 418	15,497	15 4
	July	192	103,875	20 172	19 4
	August	192	111,730	24,967	22.3
	September	192	114,365	14,262	12.5
	October	192	114 147	17 122	15 0
	November	192	116,581	20,378	17.5
	December	192	118 317	32,304	27.3
1911	January	160	120,859	32,312	26 7
	February	190	120 235	29,801	24.8
	March	190	121 828	31,187	25 6
	April	190	120,877	25,798	21.3
	May	190	121,132	32,096	27.2
	June	189	121,237	27,793	22.9
	July	188	116,801	18,128	15.5
	August	183	118 445	13,670	11 7
	September	188	119,724	13,3[illegible]0	11.2
	October	188	118,007	13 657	11 6
	November	188	117,826	23 620	20 0
	December	183	115,430	29,530	[illegible]

The New York trade unions show with great intensity the seasonal fluctuations among some trades in which these influences greatly predominate They show, also, however, very strongly the cyclic fluctuation The preceding table from the American *Federationist*, the official organ of the American

---

[11] Pigou, A C "Unemployment"

[12] "Statistics of Unemployment and the Work of Employment Offices," Bulletin of the U S Bureau of Labor, Whole Number 109

Federation of Labor, from data received from all parts of the United States, shows the seasonal and cyclic fluctuation but in a much smaller degree than the New York statistics

PERCENTAGE OF EMPLOYMENT AMONG ORGANIZED WORKERS REPORTING TO THE AMERICAN FEDERATIONIST, BY MONTHS 1902-1909

Months	1902	1903	1904	1905	1906	1907	1908	1909
January		6 1	6 4	6 3	7.8	2 3	8.8	9.8
February		3 7	7.3	6.1	4 6	3.2	6.2	7 4
March		2.1	1 4	8.8	1.9	1.3	8 6	8 6
April		1.8	4.2	1.3	2.3	0.5	6 6	5 6
May		5 3	1 3		0.9	1 7	7 1	6 7
June		2.5	5 1	2.2	1 5	0.2	4 1	5 3
July		3.3	1.6	2 0	1 4	1 7	6.4	5 7
August		2 1	3.2	5.8	1 8	5 8	9 6	5 6
September		2 1	1.5	3 7	3.2	2 2	8 4	4.8
October	6.9	1 2	1.2	0.9	0.8	1 4	6.0	1.2
November	1 8	4.2	3 9	1.2	1 8	2 3	0.8	
December	1 3	1 1	2.1	1.3	4 1	1.2	0.2	
Smallest number reporting	83,277	86,203	44,870	41,148	28,300	26 680	42 700	50 418
Largest number reporting	133,354	125 626	115 406	154 118	165 671	131 050	134,720	139,856

The following tables of German statistics of unemployment in the year 1895 show, however, one point very emphatically

NUMBER AND PER CENT OF PERSONS OF THE EMPLOYEE CLASS OUT OF EMPLOYMENT JUNE 14 AND DECEMBER 2, 1895 BY INDUSTRIES

Industries	Persons in the Employee Class June 14 1895	Persons Out of Employment			
		June 14, 1895		Dec. 2 1895	
		Number	Per Cent of Total Employees	Number	Per Cent of Total Employees
Agriculture gardening and live stock	5 607 313	37 144	0 66	203 246	3 62
Forestry and fisheries	116,718	1,394	1.19	5,551	4 76
Mining smelting and salt and peat extraction	564 022	8,312	1 47	11 487	2 03
Stonework and earthenware	468 489	6,872	1 47	26,964	5 76
Metal work	719 775	20,834	2.89	27 015	3 75
Machinery tools instruments etc.	304 463	7,828	2.57	10 485	3 44
Chemicals	92,582	1 797	1.94	2 118	2.29
Forestry products lighting materials grease oils and varnishes	38 116	796	2.09	1 045	2 74
Textiles	878 494	14 494	1 64	16,838	1.92
Paper	121 526	3,158	2 60	3 475	2.86
Leather	123,914	4,202	3 46	7 486	6 04
Woodenware and carved goods	456,220	13,363	2.93	18 257	4 00
Food products	656,070	21 465	3.27	28,538	4 35
Clothing	775 671	24 317	3 13	42 078	5 42
Building trades	1 151,851	33 006	2.87	179 707	15.61
Printing and publishing	106 536	4 454	4.18	4 667	4.38
Painting sculpture decoration and artistic work of all kinds	18 765	674	3 59	1 034	5.51
Factory hands artisans etc of whom the industry cannot be classified	28,542	1 415	4.96	10 177	35 66
Commercial pursuits	626 637	22 048	3.52	26,334	4 20
Insurance	18,210	274	1 50	315	1 73
Transportation	533 150	6,027	1 10	16,280	3 04
Hotels restaurants etc	316,951	8 061	2 54	15 603	4 92
Total	13 723,825	242,857	1.77	658 750	4 80

Giving the statistics of unemployment in the industries, it is noticeable that at the end of June in the 13 000 000 persons in the employed class but 1.77 per cent. was the average of the unemployment of these trades The highest percentage occurred under factory hands artisans, etc. of whom the industry cannot be classified"—that is, evidently, the unskilled labor The percentage in this class was 4 96 It is noticeable that on Dec. 2, 1895, when the total average of idleness for all these trades was 4 8 per cent., the same class of unskilled labor had risen from 4.96 per cent to 35 66 per cent It is a striking example that the unskilled labor is the first to be discharged and suffers most from any cause of unemployment On the same date when 35 per cent of the unskilled were unemployed, the total average for the 13,000,000 workingmen was only 4 8 per cent.

Unemployment is a greater problem in this country than it is abroad Even trade union unemployment rises higher in the statistics of New York and Massachusetts than it does in Europe Miss Poyntz[13] states that during the great crises which have swept over the countries of Europe within the last two decades, the trade union unemployment statistics have rarely risen above 10 per cent, whereas in the United States the general statistics of unemployment have risen above 20 per cent and even 30 per cent The 1900 United States census only classified the unemployed according to the length of time they were idle It does not give the average duration of unemployment for the different trades, but of the 5,227,472 males unemployed in all occupations in 1900, 49 6 per cent. were unemployed from one to three months, 39 6 per cent were unemployed from four to six months, 10 8 per cent were unemployed from seven to twelve months That is, half of the employment is for less than 25 per cent of the working time and half for more than 25 per cent of the working time, so that in 1900 nearly 3,000,000 working males were unemployed for more than one fourth of the full working time. In the twenty-fourth annual report of the Commissioner of Labor, there is an analysis of 25,440 families The total unemployment was 49.81 per cent with an average number of days of 52½ All statistics as to the amount of unemployment in the United States do not enable one to answer the question or to form any possible estimate of the number of unemployed persons in the Uited States The statistics in both Pigou and Beveridge show that in England, from 1860 to 1912, the highest percentage of trade union unemployment in the United Kingdom has risen but twice just above 10 per cent in the years 1879 and 1886

Besides the problem of skilled and unskilled labor of the ordinary industries, there is the more serious problem of casual labor There are the great armies of casual workers that travel from one part of the country to the other, without homes and without family ties They work in lumber camps, in the fields, and travel about picking up a job here and there and drifting back to the cities in the winter unemployed Casual labor of men with its accompanying phenomena of underpayment, pauperism—for the paupers and vagrants will not work and are often the product of the condition of being unable to find work in the first place—woman labor, child labor, are all the results of a completely disorganized and medieval system of marketing labor While labor is peddled about in a haphazard way, without systematic information as to the demand or supply of labor, without any centralized organization for bringing these two factors into contact the elimination of casual labor and the economic distribution of labor will be impossible The public organization of the labor market, through a clearing house of labor and a system of labor exchanges, and information on the labor market covering the whole field of industry, is a necessary preliminary to any other attempts to attack the problem of unemployment

The development of unemployment insurance has taken the same course as the other forms of insurance That is, it has passed through the period of voluntary mutual insurance, caring for a few inadequately, greatly improved under voluntary state subsidized insurance and thence finally to the English compulsory subsidized state insurance It is the same development that we have seen in other forms of social insurance The only successful method by which unemployment insurance has been begun and voluntarily carried out has been through the out-of-work benefits of the various trade unions Not all the unions could afford to give it, not all the unions that did give it could afford to give adequate amounts to their members when out of work. Among those that did there was no question that they were the best administered forms of relief Each union knew best the state of its own labor market, they knew best when a member was really out of work and whether or not he could obtain work. They mutually controlled the administration of the fund and its practical application Not enough of the labor unions could give sufficient labor to make any wide impression on the situation Various charitable schemes of relief at the time of great stress were tried, the giving of public works, the giving of employment with a deterrent element in it, such as giving board and lodging for stone yard and wood yard work, etc, were all tried without adequate success They were used only when the great stress of the situation drew in both public and private help and it was found that the work with a deterrent element in it was by no means a solution The more the problem was studied it was readily seen that the problem was one of industry and not of character, and the deterrent or punishing element in it was an unjustifiable element added to the already overburden of the workman

---

[13] Hearings before Committee on Labor House of Representatives 64th Congress

The earliest attempt at a solution of the question was in the city of Berne, Switzerland, in 1893, which endeavored to give to individual workmen financial subsidy during the winter months By a certain contribution paid during eight months in the year the unemployed workmen were able to draw a certain stipend from the municipality for the time in the winter when they were unemployed and could not obtain work This form of insurance has been taken up in Cologne, Germany, and other funds have been undertaken on the same principle in other cities in Europe, such as Leipsic, Venice, Basel and Geneva These funds do not work well and successfully They are overwhelmed with 80 or 90 per cent of the building trades which are the most seasonal unemployed of the workers These funds are not run through the control of the trade unions and have not expanded to any large extent nor been very successful Finally, in 1892, in the city of Ghent, a town of some 200,000 inhabitants before the war, the municipal council decided seriously to study the situation and to see if by some form of subsidized benefit the situation might be improved In 1900[14] the municipal Council of Ghent decided to give as a subsidy to every member of a trade union 60 per cent of his out-of-work benefit when he was employed This subsidy was given under certain rules to a committee appointed by the municipality This committee pays the subsidy to the trade union, the trade union having advanced the amount to an individual out of work This subsidy is paid only in respect of involuntary unemployment, including unemployment due to a breakdown of machinery or to fire in the factory It is not granted when the unemployment is due to a strike or a lockout or to sickness or other incapacity It is paid to persons residing in the commune participating in the scheme The committee pays the subsidy to any organization which provides insurance against unemployment, but in practice all such organizations are trade unions The fullest freedom is left to the associations in determining the conditions on which they will provide insurance on their own funds They also pay to those who were forced, through unemployment, to draw on their savings—that is, they were willing to subsidize an individual and pay 60 per cent of the amount necessary for him to draw from his savings bank because he was unemployed The same person could not receive a subsidy on both insurance and savings Since 1904 subsidy has also been paid on individual savings made in provident societies The mode of operation of the fund is simple If the individual is entitled to receive 18 cents a day from his trade union as unemployment benefit, he receives 11 cents as a 60 per cent subsidy for every 18 cents given The union pays, therefore, 29 cents a day to its unemployed members, and in course of time the union submits its accounts to the committee and is paid 11 cents a day for every individual for moneys advanced, and the accounts are paid monthly It is stated that besides benefits received from the unemployment, it has improved enormously the feeling of responsibility of the trade unions to the community and the participation on the committees has been of great mutual benefit This is practically called the Ghent method

In 1908 there was a serious industrial depression in this city and the amount of unemployment was extraordinary, but the system stood the strain The unemployed benefits paid during that year totaled nearly $20,000 and the supplementary grant from the municipality was a little over $9,000 The average rate of benefit per member aided has risen from $165 in 1901 to $274 in 1906 and $355 in 1912

The effect of removing the competition of unemployed men has been to advance wages The proportion of unemployed to total trade union members has satisfactorily declined In 1896 and 1899, before insurance was admitted, the ratio was thirty-one per thousand, in 1913, the number of unemployed in the trade unions had fallen to sixteen and twelve per thousand[15] The number of poor in receipt of public aid has fallen from 1,635 in 1903 to 1,358 in 1912, a reduction which, taking into account the law, amounted to a decline of 50 per cent The number of tramps housed by the city has fallen in the same interval 24 per cent, while the number of workmen insured against unemployment has risen 100 per cent In 1913, just before the war, there were two distinct classes of wage earners in Ghent, those who are affiliated with the various forms of insurance against unemployment, sickness, old age and accident, and those who were guaranteed against pauperism, and an inferior class who were forced to appeal to public charity in case of these disasters The first group were steadily increasing in number and were really more numerous than the second group, although the improvident group of Ghent cost the public treasury twenty to thirty times more than the insured

For any successful unemployment insurance it is absolutely necessary that there must be some satisfactory method devised of helping the workless man find work In Ghent a labor exchange had been established by the Council in 1891, but it proved itself so inadequate that in 1904 it was reorganized and the employers' association and trade unions were equally represented on the governing board Thus loyal cooperation of both parties to the labor contract was enlisted In the first four years after its reorganization the number of positions filled at the municipal labor exchange was quadrupled Every insured man was forced to report his unemployment at the labor exchange and naturally on failing to find work, he procured the 60 per cent offered by the unemployment fund The Council of Ghent was further contemplating another precaution against unemployment—that is, the foundation of the Crisis Fund The employers were invited to subscribe a fixed annual fund on the understanding that a municipal subsidy would also be accorded This money was to be used in helping such of their employees as might be discharged or placed on short time in a period of business depression

Thirty towns in Belgium have followed the example of the city of Ghent, twenty in Holland, ten in France, three in Italy, and two in Switzerland, and the Ghent idea of help for self-help lies at the basis of the national scheme for insurance against unemployment recently adopted in Denmark, Norway and Great Britain One town in Belgium, Liege, has modified slightly the Ghent idea Liege pays its subsidy direct to a labor union, not through a committee Moreover, it pays for unemployment due to lockout but not due to strikes In some places the Liege idea prevails and in others the Ghent idea The result, however, is the same

The first application on a national scale of the Ghent idea was undertaken by the new kingdom of Norway In 1906 a law was passed to encourage and develop the efforts toward self-insurance already in operation among the principal trade unions Since these unions are state-wide federations, the cooperation of all the towns and communes in Norway was necessary The statute provided that the states and the communes concerned should reimburse one fourth of all benefits paid from unemployment funds organized in accordance with certain prescriptions Only such employment funds were to be recognized as derived at least half their resources from members' dues, and the fund must be independent of the trade union treasury and devoted exclusively to the care of unemployed members At first there was a bitter opposition from the labor unions to having any nonunion men participate Finally, it was agreed that the nonunion member must pay an addition of from 10 to 25 per cent of the dues required from union members, and the original subvention of one fourth was raised to one third and nineteen of the labor unions agreed to participate Up to 1914 it was said that one nonunion man had applied for membership in an unemployment fund As there are 75 000 unorganized laborers in Norway, the problem of the unskilled laborer still remains unsolved The terms on which benefits may be paid are that the unemployment must be involuntary, it must not have been caused by strike or lockout or by drunkenness or bad temper The applicant must have reported to the nearest employment agency without, however, being able to find suitable work, and he may not receive double benefits—that is, he cannot be in receipt of aid from another fund The member must have paid dues for twenty-six weeks and his benefits are not paid him for the first three days after he has announced himself out of work, nor can he receive these benefits for more than ninety days in any one year An average membership due of $1.90 a year covers the normal amount of unemployment with an allowance of half the daily wage All benefits are paid in the first instance from the unemployment funds maintained by the trade unions Four times a year the state repays to the unemployment fund one third of the money legitimately expended by them, two thirds of the money furnished by the state is later returned from the communes, each paying in proportion to the number of beneficiaries resident therein About 20 000 men are covered by this insurance, which is about 50 per cent of the organized labor of Norway As unskilled labor is practically uncovered and only about one half of organized labor, this scheme has not yet reached those who need it the most It is said that a project for revision is being discussed which may render insurance for unemployment obligatory for seasonal trades

---

[14] Gibbon, I G Unemployment Insurance

[15] Coman Katherine Unemployment Insurance

In Denmark, in 1907, a law was passed which offered a subsidy to recognized unemployment funds amounting to one half the premium paid the members Communes to pay an addition of from one third to one sixth of the sums contributed by persons residing within their limits on the understanding that the state will subscribe an equivalent sum Thus the total public subsidy might amount to two thirds or even five sixths the membership dues and surpass in generosity the Belgium municipal grants of from 50 to 60 per cent. of the benefits paid

The advantage in Denmark of estimating the government contribution according to premiums paid in rather than benefits paid out lies in the possibility of accumulating a reserve fund in good times against the years of depression The unemployment fund must have a distinct legal entity, and its treasury must be entirely independent of the treasury of the trade union with which it is affiliated Six representatives of the unemployment funds, together with an inspector general make up the Council of Unemployment, and this body settles all questions of policy For example, it was determined that a man would not be considered entitled to unemployment benefit until he had sought and failed to obtain work outside his own trade A member must be ready to accept any work for which he is competent and only when no suitable work is found has he a claim on the unemployment fund There has been also established by the Labor Exchanges Act an employment bureau in every town and commune to act in cooperation with trade union agencies Fully 60 per cent of the industrial wage earners of Denmark are now insured—73 per cent of the insurable women and 28 per cent of the insurable men The unskilled workmen and casual laborers untouched by the Norway unemployment system have been brought within the scope of the state aid in Denmark by a very effective labor organization. This was through the personality of an unskilled laborer The membership of this unskilled laborers' union is now 39,000 The hope of adequate insurance against unemployment was the primary inducement but the organization has also been instrumental in forcing the general advance of wages in reducing the amount of night work and Sunday labor and securing extra pay for overtime. Each member contributes $2 75 per year to the unemployment fund connected with this union, and is entitled to a benefit of from 27 to 40 cents a day for seventy days a year for legitimate unemployment.

Within the limits prescribed by law the conditions of unemployment insurance vary with each fund, the rate of wages and trade represented, the amount of unemployment and the chances of finding work are the factors that determine the amount of dues, rate of benefit, as well as period of support The dues vary from a minimum of $1 40 paid by the unskilled workwomen to a maximum of $7 per year paid by the workers in stucco The daily stipend is 27 cents, 40 cents and 54 cents, according to the financial status of the fund The period of payment runs from fifty days in the year, allowed to unskilled laborers, to 160 days allowed to printers The total amount of benefits paid in 1912 was $454,810, of which 53 8 per cent was contributed by the members, 31 9 per cent by the state and 14.3 per cent by the communes The total aid of unemployment from all sources for a period of five years during which the act has been in operation amounted to $1,755,000

The labor problem in France differs from that in England and America, in that France is still the land of small industries, and the problems of commercial crises do not have such an intense influence as in England and America The problems of casual labor are not so acute According to the last three censuses, the proportion of wage earners involuntarily out of work to total wage earners has been steadily decreasing It was 3 1 in 1896, 2 97 in 1901 and 2 33 in 1906, and the general average for the whole country just before the war was 300,000, a figure which could be easily duplicated in New York City in 1913-1914

Insurance against unemployment through the agency or trade unions, aided by municipal subvention, has been in use in some thirty French towns for more than a decade. The system followed is usually that described for Ghent In 1905 the appropriation of some $22,000 was voted by parliament as against unemployment This state grant is paid every six months into the unemployment fund maintained by the unions and reckoned according to benefits, and is not paid to the members direct The rate of allowance varies between 20 per cent for local organizations and 30 per cent for varied trades, which last are organizations with a membership of at least 20,000, representing not less than three governmental departments This preference of 10 per cent is given because it is believed the federated trade union is better able to control its members and provide for more opportunities to work and is of more enduring nature This state insurance has not advanced very far, and the usual private employment agencies have an exceedingly bad reputation for their honesty It is said, however, that in the northern part of France, just previous to the war, the unemployment insurance had taken on a sudden increase in activity and that at the proceedings of the unemployment conference held in Paris, in 1910, it was evident that a great interest in this subject was aroused in France

Germany has not as yet any direct insurance against unemployment. It has, however, a thoroughly well-organized series of labor exchanges, the object being to put the employers seeking help and the employees seeking employment into immediate communication In 1908 it is said by Beveridge,[16] the Imperial Statistical Office in Germany received regular returns from over 600 registries and exchanges filling from 150 000 to 180 000 situations in a month The labor office in Munich is typical, and its stated objects are to put employers and employees into communication with a view to employment and to supply as far as possible information on all questions concerning workmen and committees of employment. It has also the duty of supplying the municipal statistical office with material for statistics as to employment and the supply and demand for labor in each occupation and at various seasons It is managed by a committee consisting of three employees elected by the employee assessors of the industrial court and three employers and the official chairman nominated by the municipality No fees are charged either to employees or employers, the whole cost being borne by the city of Munich The labor office is divided into three sections for the men, the unskilled, the skilled workers in iron and wood and all other skilled workers Each group has its own waiting room There is one room for apprentices and two for women, the industrial workers and the domestic servants The applicants for employment go to the appropriate waiting room and fill out a short form of details, and the employer sends to the exchange either by telephone, by post or by his representative, or he can go himself If a request is received by telephone, the exchange sends the workman to the employer with a card of identification which is mailed back If an agent or the employer himself has called, this is not necessary In the unskilled section men stay in the waiting room all day, in the skilled section there are fixed hours for each trade The labor office appears to concern itself very little with inquiries as to the character of the applicants for employment Efforts are, of course, made to send the sort of man asked for by the employer, but in the unskilled labor it is considered the employer's place to satisfy himself of the capacity of the man he engages The direct utility of the labor office is to prevent economic waste by employers seeking for men and men for employers Thousands of situations are filled outside of Munich, some outside of Bavaria and some even in foreign countries from this exchange

---

[16] Beveridge Unemployment a Problem of Industry p 239

The Berlin exchange is the largest in Germany, filling, in 1906, all but 100,000 situations This is a voluntary, not a municipal institution It charges a small fee of 5 cents, in return for which the applicants get a certificate admitting them to the waiting room of the exchange for three months or until they are placed in a situation The exchange premises are divided into two distinct buildings—one almost entirely devoted to unskilled labor—and contains a waiting hall capable of seating 1,000 men In the other building there are a number of separate sets of offices which are sectional exchanges for separate trades Each trade has not only its own office, but its own staff, its own committee of management representing equally the employers' and the employees' associations concerned, and they hold a very strong position amounting almost to a monopoly in the field of furnishing situations in their trades

The Strassburg labor office has a scheme in force of augmenting from a municipal fund benefits paid by trade unions to their members One of the conditions for the receipt of this municipal subsidy is regular registration at the labor office Able-bodied recipients of outdoor relief are required to register daily and must accept any offer of suitable work at the current rate of wages, on pain of losing their allowances Another point to notice is that all contractors for city works are under stringent penalties bound to engage all their men through the labor office These exchanges are also used as a means of preventing as well as relieving distress At Freiburg, in 1906, 34 3 per cent of men registered were still in employment at the time of their application, the man thus losing no time between cessation of employment and a new job No public exchange requires the enforcement of any other condition of labor, as within its functions employer and workman must make their own bargain, the exchange cannot and must not attempt to do any more than put them into communication If the employer offers an exceptionally low wage, the exchange simply calls his attention to the fact, and any man willing to accept the offer is free to do so

The question of whether men should be allowed, through these agencies, to take the place of others on strike or lockout has been much discussed To supply the men is apparently to take the side of the employer against the employee, and to refuse to supply them is to take the side of the employee against the employer The practice most approved is to register vacancies created by a dispute and to notify them to applicants for work, but in doing this to give formal notice of the dispute to the individual applicants and also by placards placed in the exchange premises At first the trade unions strongly condemned these labor exchanges, but after a few years the trade union congress has instructed organized labor to use these exchanges It is believed that the conversion of hostility to support of the trade unions is due to the experience of the value of exchanges in shortening for the individual workmen the average period between one job and the next, and thus for the union diminishing the period of unemployed pay and the failure of purely trade union exchanges to secure general use by employers, except in a few trades in which the men were already completely organized, also to the establishment by employers of their own exchanges in definite opposition to trade unionism A public exchange is at any rate better from the workmen's point of view than an exchange managed deliberately with the object of maintaining a large reserve of labor or of blacklisting individual agitators The printing trade, however, has, throughout Germany, its own organizations maintained by a joint agreement of employers and employees

It is very generally realized that to put on the individual workman the whole burden of finding a market for his labor is to leave to isolated action a matter that should be organized Everything except labor is bought and sold in its own mart These labor exchanges do not solve the unemployment problem They simplify it enormously and are indispensable to a solution

The labor situation in England and the unemployment question became so acute that in 1909 England determined to follow the example of Germany and create a centralized and organized system of labor exchanges The Royal Commission on Poor Laws and Relief of Distress from 1905 to 1909 unanimously recommended the establishment of such a system of labor exchanges as an essential part of any scheme dealing with the problem of unemployment In September, 1909, the act was formally passed to this effect In 1905, under the Unemployed Workman Act, certain labor exchanges or bureaus were already in existence, but power was given to the Board of Trade to take over these former exchanges which had become practically of little value and most of them inactive or dead Some sixty exchanges were begun in February, 1910, and by the first of May, 1911, the number had risen to 200, and after the passage of the Compulsory Insurance Act, in 1911, the number of these exchanges had risen to 400 It is contemplated by establishing local agencies for the labor exchanges in various districts that there will be within 5 miles of any considerable body of workers an agency or an exchange to which the employee and the employer may go for the exchange of labor The cost of these labor exchanges is borne by the national exchequer For the purpose of administration and control, the United Kingdom is divided into eight divisions Each of these divisions has a divisional office which forms a control center for the exchanges within its area and has a coordinating administrative authority over the whole, and there is a central office in London All agencies and exchanges are thoroughly linked together by telephone service A labor exchange is defined by the act as "any office or place used for the purpose of collecting or furnishing information either by the keeping of registers or otherwise respecting employers who desire to hire work people and work people who seek employment" The Board of Trade is the official body under which these exchanges act, and there are certain regulations under the National Insurance Act of 1911 Under regulation, a statement as to the existence of a strike or lockout affecting their trade may be filed at a labor exchange by associations of employers or workmen, and the officer in charge of the exchange in notifying of vacancies calls the attention of labor applicants to any statements that have been received In 1914 there were 400 exchanges open at the end of the year Over 2,000,000 individuals had registered and over 1,100,000 vacancies had been filled and 814 000 individuals given work thereby The proportion of individuals given work to individuals registered was 37 5 per cent and the proportion of vacancies filled to vacancies notified was 75 5 per cent These labor exchanges in England were first looked on suspiciously by the labor unions, for in the previous ten years they had already distributed $20 000 000 in unemployed benefits But in the end the trade unions have cooperated

In 1911 the compulsory unemployment insurance was passed under the National Insurance Act against sickness This act is compulsory for all workmen in seven trades building, construction of works, shipbuilding, mechanical engineering, iron foundring, construction of vehicles and wood sawing The employers and workmen each contribute 5 cents a week The rates under 18 are 4 cents The dues are paid through the employer and he deducts the workman's share from his wages An amount equal to one third of the total contributions of the employers and workmen is contributed by the government. To be able to enjoy these benefits a workman at first was required to have paid dues for twenty-six calendar weeks for the perceding five years, but in 1914 this was amended to payment of ten full contributions. Benefits are paid in an insured trade to those who have made application for unemployment benefits in the prescribed manner and who have since the date of application been continuously unemployed, who are capable of working, but incapable of obtaining suitable employment, and who have not exhausted their rights to benefits under this part of the act. A workman is not obliged to accept employment lower than that fixed by custom in his trade or locality, nor to accept work in an establishment in which there is a trade dispute. No benefits are paid during strike or lockout. If a workman has been discharged for misconduct or has voluntarily left his employment without just cause, he cannot enjoy benefit for six weeks.

Further, to prevent unemployment, one third of the contributions are refunded to those employers who keep their men regularly employed and who have paid forty-five weekly contributions during a year. Provisions are also in the law to refund contributions paid in respect of workmen working short time in times of depressed trade. Higher contributions are levied for casual employment, except that the employment of different persons on different days through a labor exchange may count as steady employment for one person. Workmen who have paid contributions for 500 weeks are entitled to the return of all contributions paid, with compound interest at 2.5 per cent. a year, when they have reached the age of 60. The Board of Trade has power to extend the provisions of the act to trades other than those specified in the original draft, and after seven years may revise the rates of contribution and prescribe different rates of contribution for different insured trades, providing no increase shall be more than 2 cents a week. The association of workmen in an insured trade may make an arrangement with the Board of Trade by which the union is repaid three fourths of the amount of benefits paid by its unemployed members, provided the total benefits paid exceed the state benefit by one third. There is also a provision for repayments of the amount of one sixth the benefits to associations which make payments to unemployed workmen, whether in an insured trade or not, provided the benefit does not exceed $4.25 per week. Any employee may obtain an annual refund of 73 cents for each workman for whom he has paid forty-five contributions or more during that insurance year. This is to encourage voluntary unemployment insurance in other than the insured trades. The benefits fixed of $1.75 per week are, of course, not sufficient for full maintenance, but do prevent destitution. These are limited to fifteen weeks in one year, and not in greater proportion than one week of benefit to five weeks of contribution, and are not paid during the first week of unemployment.

The effect of this act in England cannot be accurately estimated in comparison with the conditions of the last two or three decades. The first annual report of the Board of Trade, however, showed that the fund had expended less than was expected and had accumulated a fund of $8,000,000. Of the 1,044,000 claims for benefit, 72.1 per cent. were made directly to the Board of Trade and 27 per cent. were made through trade unions. It was further shown that this compulsory insurance had stimulated voluntary insurance of trade unions, but during the first year's operation 172 unions, with a membership of over 376,000 in uninsured trades, had made arrangements to gain the subsidy. The Board of Trade further states in its first annual report, that its first year's experience shows among other things that compulsory state insurance is administratively practical, and that it can be introduced without destroying voluntary insurance, in fact, the amount of voluntary insurance has been enlarged under the operation of compulsory insurance. After three years the statement is further made that the experience warrants the belief that compulsory unemployment insurance administered along the lines of the British act is practical and possible.

The difference during war time in England is such that unemployment has greatly diminished. The average of the previous ten years of unemployment among the trade unions was 4.8 per cent. In 1915 the mean annual percentage of unemployment in British trade unions was 1.1 per cent. This compulsory insurance unemployment act covers between 2,250,000 and 2,500,000 workers in insured trades, but in July, 1915, there were 2,019,683 members of the trade unions under the act, which means that about 500,000 had enlisted for the war. The English labor year book for 1916, in discussing unemployment insurance, suggests that the British system falls short because it is far from universally applied, indeed at present it applies only to one sixth of the wage earners and hardly to any women. It is far from adequate, for the provision of $1.75 per week is insufficient for the proper maintenance of a family, and there is nothing to save the unemployed man from the deterioration which long unemployment almost invariably produces. It is suggested that during his periods of unemployment a manual worker should have opportunity to put in his time at self-improvement, and that he should be able to attend, free of charge, the trade schools, day technical and other classes that the local educational authorities should provide. Moreover, the amount of subsidy of one sixth of the amount paid by employee and employer is not sufficient to stimulate the trade unions to take up the unemployed benefits and, in addition, the conditions imposed by the Board of Trade *requiring registration* at the labor exchanges, etc., prevents some unions from coming under the clause. Attention is drawn also to the fact that under the Ghent system on the continent out-of-work pay in some trade unions is equivalent to half-pay of the worker.

In comparing the different forms of unemployment insurance, it can be said that in general the voluntary unemployment funds are hampered by the fact that only a comparatively small number of workmen join them. It is also said that the results of the Ghent system must in general be designated as slight. Its purpose, "training in self-help," has been fulfilled almost nowhere, either in the sense that the trade unions have received a greater influx of members because of the subsidies, or that they have introduced unemployment benefits. Only this has been attained—the benefits given by these unions have been increased. However, those who have received them constitute a comparatively small portion of the unemployed, even where, as in Denmark, the organization of workmen was far advanced before the introduction of the subsidy system. In Belgium however, in the mother country of the system, comparatively few workmen reap its benefits. It is true that the organization movement has forged ahead in Germany much farther than in Belgium or in France, and that unemployment benefit has attained a much greater development there than in other countries. Yet it has thus far been impossible to determine any effect on the strength of organization, and on the development of unemployment insurance in the cities which have introduced the Ghent system. The light financial burdens which according to the tables, are necessitated by the Ghent system—in nine German cities for which we know at least the amount of the annual grants have added up to a little more than $10,000—have aided its adoption greatly, but have at the same time contributed to decreasing its efficiency in the campaign against the consequences of unemployment. Hence, its ardent champions have become convinced that at least a partial compulsory insurance system should be instituted.

It is, therefore, seen in unemployment insurance, as in sickness, health, accident insurance and care of old age, the voluntary and the subsidized methods do not reach the results desired and that some form of compulsion is necessary to bring about the universal application and the full benefits of these social insurance laws.

The Social Insurance Committee of the American Medical Association has made, during the past three years three extensive reports to the House of Delegates which contain, it is believed, the essential information on which definite conclusions may be drawn as to the value of the various kinds of social insurance which have been designed to protect and help the wage worker from the injurious effects of the hazards of ordinary life. The origin of these laws is of no consequence. Whether we consider that they are the development of the ancient relief societies going back among the Austrian miners as early as 1280, whether they are the development of the guilds of the middle ages in the various countries, whether it all arose as a conception of Bismarck's in Germany, thirty years ago, being used by that statesman in his endeavor to counteract the growing spirit of socialism, whether they are the expression of economic laws developing through the organized collective sense of various peoples, or whether they are an expression of a developing strong centralized state power

With us in the United States, whatever may be their origin or development, they are bound to be modified and presented in different forms by the forty-eight state governments of this Union, and, in the end, be a compromise between federal statutes and statutes in the various states In the great industrial development of the last century, Germany was the first one to grasp the significance and necessity of these social insurance laws, and from that country they have spread in various modified forms throughout the civilized world The United States is the last great civilized and industrial nation to begin to put them in force It is a noticeable feature that when any country has once taken them up or taken one form of social insurance up, these laws have invariably extended and the adoption of one form after another has followed The failure of one little Swiss town, St Gall, to continue compulsory unemployment insurance, and the rejection of the first compulsory accident and sickness law by the Swiss Federation have been the only two exceptions to the above statement

Although, in Germany, the element of compulsion has from the beginning been a pronounced feature of their social insurance laws, it is an interesting study to see in other countries the development of voluntary insurance which has proved inadequate, then voluntary insurance subsidized by the state, which, although more successful, was still inadequate, and, finally, in the same country, the full compulsory insurance in order to reach universality of application and the full development of protection to those whom these laws were designed to protect This development has been especially true in the matters of accident and health insurance The hazards of life that social insurance has been designed to cover are accident, sickness, motherhood, chronic invalidity, old age, premature death and unemployment and provision for widows and orphans Only England and Germany possess nearly a complete system of social insurance—a curious contrast as representing one of the most democratic and one of the most autocratic governments in the world today

In other countries the social insurance which exists shows an irregular intensity of development in each country, whether it is because the need of each separate form is different in each country or because the technical difficulties are smaller in one form of insurance than in another Industrial accident insurance represents the best developed branch and, as Rubinow points out, in the order of their development the other branches may be placed thus—sickness insurance, maternity insurance, old age insurance, mothers and widows' pensions, and unemployment The development of this whole movement is so strong, so well defined and universal, that it cannot be explained as arising from any peculiar racial or national psychology or peculiar political conditions of any country It is seen in its highest development, as has already been said, in the most democratic and the most autocratic countries today It is rapidly developing under other monarchical, constitutional and republican governments Peoples of Teutonic, Latin, Anglo-Saxon and Slavic ideals have taken up and developed these ideas of social insurance, and the older races of Europe — Servian, Roumanian and Hungarian—have equally adopted and developed their own modifications

Social Insurance in the United States

Regarding social insurance as a whole, this country is still in the stage of investigation, but the rapidity with which, after a few years—less than a decade—protection against industrial accident was taken up and adopted, shows clearly that when the idea is once understood and grasped how rapidly it appeals to all nationalities, although a few years ago the accident insurance was condemned as un-American and the same adjective is being used against the other forms of social insurance today as they are discussed It has been a noticeable feature that all official investigations in this country have led to the approval of at least the basic principle in the movement for social insurance There is no question that the enormous modern industrial development has increased the hazards of the wage earner and has increased also the dependence of a large part of the population on their own physical well-being and working capacity This country, today, still possesses the strongest development of individualism, but so great has been the collective development of industry and so strong the collective development of industry, and so strong the collective development of labor, that the collective protection of the individual against a universal hazard has found ready and vigorous support Besides all that, the last few decades have shown an enormously increased development of a strong social and ethic sense of the spirit of solidarity, which sees in the abstract the justice of the endeavor to use collective protection in preference to the older idea of relying for protection on the unaided powers of the individual Whether poverty and destitution are on the increase in modern society is a difficult problem to solve and somewhat beyond the point It is a fact that cannot be disputed that there is a very widespread and strong determination on the part of modern organized society to prevent, or at least to remedy, existing poverty and destitution as altogether unnecessary in modern possibilities of production It is difficult to find any scientific reason for the support of the view that this world-wide effort is altogether unnecessary or impossible in this country The higher working capacity of the working masses of the United States, as compared with many European countries, is recognized though often exaggerated, but it is practically neutralized by a higher standard of prices and also a higher standard of living, which presses on the earnings as closely as in other countries In any case, the fact that a very large portion of our working population only earns the necessary amount for a decent existence, and in many cases the earnings are below the physiologic minimum for the support of the family, has been repeatedly established by numerous investigations The increasing activity of numerous charitable agencies—public and private—is sufficient evidence that wage conditions alone in this country are unable to cope with the grave problem of destitution It must not be forgotten that all insurance, whether private or social, is based on recognition of the fact that over and above the demands of a normal standard of living there are the demands of exceptional hazards and emergencies which cannot be met individually and must be met in a collective way, which is the underlying principle of insurance

Effect of Social Insurance Laws

Let us see, then, what has been the effect of these social insurance laws in the countries where they are well developed, and the effect on the medical profession where these laws have been actively in force

Comments by Prof Walter Ewald, in his book on "Social Medicine," are of peculiar interest to the medical profession, as Professor Ewald is a physician and public health officer and also a lecturer on social medicine in the Frankfort Academy for Social and Commercial Sciences In the second volume of his work not only is there a careful description and discussion of all forms of social insurance, but there is also a critical study of the general principles and details of the German social insurance legislation and also of the results of such legislation Ewald begins with the following significant statement

> German social legislation, which has grown throughout decades from a very small beginning to the present size and complexity, is a truly monumental work of inestimable value for the welfare and health of the people When one studies the present day services of this social legislation, one must arrive at the conclusion that we are dealing with a work which until very recently has given the German people a tremendous advantage over all other countries in the field of social care and protection of the workers against the hazards and sickness of their occupations He further says, The German Empire from the very beginning selected the compulsory principle and has proven that in this way social insurance can be made successful Opposed to this so-called

Germanic principle is the Latin principle of voluntary insurance as the basis for social legislation At the last International Congress for Workmen's Social Insurance held in Rome, in 1908 the splendid results of obligatory insurance and the failure of the Latin principle were universally admitted Unquestionably, optional insurance is ethically higher Were it practicable it would be more valuable than compulsory insurance but optional legislation cannot furnish what compulsory insurance has done

He concludes as follows

> The German system of social insurance is an enormous structure which deserves our fullest admiration, since insurance furnishes the implements of warfare against sickness accidents and crime. If public health in Germany during the last thirty years has made remarkable progress out of proportion to progress in general economic conditions of the people but far beyond that credit is entirely due for this to the system of social insurance which not only relieves its beneficiaries of the anxiety and worry caused by sickness, but even prevents such anxiety from arising

Ewald in considering the results in Germany of these social insurance laws states that

> In viewing the results of German workingman s insurance it is impossible to escape the feeling that we are dealing here with a social institution of the very first order The German people are under very great obligations to their institutions for insurance of workingmen for social insurance has saved innumerable lives protected large numbers from becoming cripples or invalids preserved or reestablished the working capacity and protected them from misfortune and need It has led toward the prevention of disease and has stimulated a nation wide struggle against tuberculosis and other social diseases. In one branch of insurance it has already extended protection to the coming generation and will also extend it in other branches in the near future The individual has been granted his right and the social organism has been rendered an inestimable service.

So much has been said about the harmful effects of malingering, traumatic neurosis, etc., resulting from social insurance on the psychology of the German people, that it is interesting to know that Professor Ewald insists that these dangers are very greatly exaggerated that in the field of sickness or health insurance simulation is scarcely observed and that suspicion is much stronger in the case of the voluntary members of the German system Malingering is more frequently in the field of compensation, for in invalidity insurance the benefits are so slight there is very little opportunity to benefit by any malingering or exaggeration of disability The simulation of disease, he says, has already existed wherever a grant of any benefit or the relief from any duty was made contingent on the presence of disease. The phenomenon of this nature followed compulsory military service, but no one issued this as an argument against such service It was to be expected that social insurance should also develop a certain amount of simulation Professor Ewald does not hesitate to criticize any detail of these laws especially as to their effect on the medical profession, as we shall see later He is not a universal eulogist

W H Dawson, in presenting his book on "Social Insurance in Germany" to the English public, says in his preface

> No one who has followed the development of the German social insurance systems and who knows the immense educative influence which they have exerted upon the working classes can doubt or wonder that it is the preventive work of the insurance organizations as applied alike to disease and accident which most appeals to the imagination sympathy and confidence of those in whose interest these laws have been passed. For after all, in Germany as here and elsewhere, what the self reliant workman values more highly than distress benefits is a fair and full use of his faculties. What he wants is not sickness pay but a healthy life not accident compensation but sound limbs and unimpaired energies not infirmity pensions but the opportunity and the power to follow as long as possible the employment of his choice. Hence in their aggressive campaign against disease and their constant endeavor to lessen the risks to limb and life in industrial occupations the insurance authorities have from the first been conscious of the goodwill of the working classes and have from no quarter received greater encouragement and praise than from the recognized leaders of organized labor The wider effects and influence of social insurance have never perhaps been stated with greater clearness and force than in the following words of that keen economic thinker and philosopher the late Dr Albert von Schaffle The supreme aim of statesmanship is not the wealth and efficiency of the few but the greatest physical material and moral force of the entire community by which a nation maintains its position in the struggle for existence. From this standpoint everything that makes the masses of the population secure against need and therefore on the lowest plane contented that strengthens a people by its own cooperative effort that creates social peace and prevents violent agitation that transforms the spirit of mendicancy into a consciousness of State-directed collective self help and that raises the entire moral and political level of the lower classes is of incalculable worth And all this is done by the system of obligatory self insurance against want and distress.

The president of a large association of employers in the iron and steel industry states that

> According to our observation the employers willingly bear the costs which the insurance laws impose on them and it is doubtful whether a single employer would wish to be without these laws so far as the cost is concerned The laws pay employers from their own standpoint since they too, are given a greater feeling of security They are free from moral and physical burdens which the individual would not be able to bear and they are protected against the constant disputes with exacting claimants The best proof that the expense cost to employers by the compulsory insurance laws is borne most willingly is furnished by the fact that so many firms in addition carry on voluntary welfare institutions in behalf of their employees.

A certain amount of dissatisfaction is sometimes felt by employers on the ground that the insurance laws are believed to be to some extent abused These statements are often made more strongly in conversations than in written testimonials, and it is said that the laws have been accompanied by one petty drawback—an increase of querulousness and of simulation on the part of the injured and sick, but these abuses are acknowledged to be negligible when compared with the great advantages of the laws

It is idle to pretend that attempts are not made, and often made successfully, to obtain benefits improperly But in discussing these, it is said that while there is a tendency to create in those who are not fond of work a diseased craving for pensions, wherever possible for life, on account of trivial disablement This is called pension hysteria and is a characteristic of the accident insurance system to which medical men have emphatically called attention Phenomena of this kind naturally reduce somewhat the value of the insurance systems for the improvement of the national health and strength, yet, in spite of all, the advantages of these systems are so great that the disadvantages alluded to, while it is necessary to combat them, cannot be mentioned in comparison

Another statement that the standard of life of the workers has been raised by the insurance laws admits of no doubts whatever On the other hand the sense of responsibility has been weakened owing to the fact that these laws have relieved the workers of anxiety and will do so in a greater degree when the projected insurance to widows and orphans is introduced Another employer says that the assurance that the law will provide for all the vicissitudes which may befall them and will intervene under all circumstances in case of need weakens the feeling of responsibility in many workers, and this he regards as the most serious defect of these laws On the other hand, it is certainly significant that many German authorities on the insurance laws, on long observation of their operation and influence, have come to the conclusion that it has encouraged, not discouraged, thrift, and, in general, have proved educative and morally stimulative to a marked degree The following editorial appeared in a labor newspaper in November, 1908

> The serious objection is made against the insurance legislation that it has destroyed the workman s consciousness of responsibility It is contended that the workman is so well provided for by insurance that he no longer feels under any necessity to care for the future This complaint is unfounded In the first place it must be pointed out that the insurance benefits supply but a fraction of what a working class family needs in time of sickness To the extent that this is the case providence is actually impossible except in isolated cases In many reactionary circles however spectres are seen everywhere though none exist Here and there the idea seems to prevail that the workman strength should be strained to the utmost by exposing him and those dependent on him to abject want directly his health gives way But a contented and efficient working class will never be created by any such means Experienced teaches every day that the workman is happiest in his work and brings the greatest interest to the welfare of the community when he has the tranquillizing thought that he has a certain security even in bad times The contention that his feeling of responsibility is disappearing is absolutely unfounded Rather the contrary is true

The attitude of the German working classes toward these laws is unquestioned—a complete change since the earliest of these laws was passed The Socialists were among those who voted against it, the Socialist party also criticized severely the first old age and invalidity law, but when the law was amended ten years later, the voting in its favor was almost unanimous Since then the labor party in the Reichstag has warmly supported any development of the social insurance legislation although often disagreeing with the parties in power in matters of both principle and detail It is safe to say that of all the laws passed in the interest of labor since the laws were established, the insurance laws are the most valued of the working class and this holds good particularly of the sickness and invalidity insurance laws Dawson goes on to say that not only so, but the German workman bears the cost of insurance, heavy though it is when compared with that which will fall on the working classes of England under the National Insurance Act, with marked willingness, and looks on the weekly deduction of his high contributions as perfectly equitable and self-evident What makes the German workman specially attached to the laws is the knowledge that the benefits which they confer are, in virtue of his large contributions, a right and not a benefaction

One employer is quoted as saying that it cannot be said that the insurance laws have created a more contented working class That the work people themselves are contented is not maintained Even with the benefits under the insurance laws greater than they are and granted at the employer's expense, there would be no permanent satisfaction of the work people's wishes, but the reason for this lies in human nature and not in the laws

All these quotations would seem to show that the laws have accomplished what they were designed to do But they have not accomplished results for which they are often held responsible and for which they were never designed That is, these laws have been designed especially to relieve the distress and strains of want when the income of the family ceased, through accident or sickness to the wage earners, or when the income of the wage earners of the family ceased through invalidism or old age These laws were not designed to cure pauperism, nor were they designed as a cure of poverty They were designed to prevent poverty changing into destitution through the hazards of accident, sickness and old age, and this, in Germany, they seem to have done. There seems to be a difference of opinion in Germany, as elsewhere, as to whether or not, if by one's own efforts one can, by small investments, make secure one's existence against the results of these hazards and against the results of sudden and persistent unemployment, one thereby weakens the moral fiber and weakens the energy of the wage earner Does worry and the fear of want, does the never haunting spectre of destitution increase the moral courage and the mental vigor of the wage earners who live on such small wages that their existence is one of from hand to mouth?

The point of view that destitution and the necessity of an appeal to charity are necessary for the spiritual and moral development of the working classes and that the poor should be kept poor that the well-to-do may develop spiritually by the giving of charities, are not doctrines that are founded on scientific basis or that appeal to ordinary vigorous common sense These laws are not designed in Germany or anywhere to cure pauperism beyond the endeavor to keep poverty from turning into destitution and from discouragement and hopelessness changing into pauperism, for we must clearly differentiate, in studying these laws, the difference between poverty, destitution and pauperism

Pauperism, Poverty and Destitution

Pauperism must be clearly differentiated from poverty, that larger and more important problem which presents many aspects which may be wholly unfamiliar to those who know only pauperism, some of those aspects face toward economic reform, others toward health, housing or the administration of justice Poverty is really an economic maladjustment in which the economic environment has so overwhelmed the individual that he is unable to rise out of it Sickness, malnutrition and the resulting discouragement often turn poverty into pauperism, for, psychologically, pauperism is poverty plus a mental attitude in which are mingled discouragement lack of ambition and imagination, thriftlessness, irresponsibility, passive resignation to a parasitic relation to society, often the result and expression of feeblemindedness"[17]

Destitution is when the economic wants produced by poverty become so severe that families must face starvation or turn to charity in order to live Social insurance laws are designed to relieve the economic environment of the working classes that the ordinary hazards and emergencies of everyday life may not overwhelm them in their economic struggle, and while they may not prevent the calamity, they do protect against its effect They have, in Germany and elsewhere, prevented poverty from turning to destitution, but feeblemindedness and degeneracy produced by alcoholism and the misfortunes of the weak and inefficient they have not prevented, nor do they protect against the consequences from these defects in human nature nor are these laws so designed to do Many criticisms are expressed in this country that because they have not cured and prevented pauperism and poverty these laws have failed in other countries

In England one may see more clearly the effect of a compulsory insurance law put into force In Germany a generation has passed by since these laws were first promulgated, and one can well see in that country the effect of a generation of these laws in abolishing the slums and excessive mass of destitution that was present in England in the latter part of the last century Although the laws in England have been in vogue but six years and during three of those years the nation has been under the stress of a terrific war, during which unemployment has practically ceased to exist, however, it is still possible to judge somewhat of the effect produced on the economic condition of the working people One very noticeable feature of the effect of the English law was the enormous amount of unsuspected sickness that it brought to light, especially among the women These women had been unable to stop their work and properly care for themselves, but had to drag on half sick, struggling on with their work Physicians working among them were surprised at the amount of real illness which came to light when these people, by right and not by favor, could go to a physician and ask for proper care

Under the present industrial organization we have shown, under unemployment insurance, that unemployment is one of the most frequent causes of continued poverty and destitution How the unemployment insurance can relieve poverty and, together with the sickness insurance, relieve the hazard of cessation of income, can be shown in a certain measure by the effect of the English insurance law in its relationship to the working of the English Poor Law It is difficult, however, to unravel the two effects, because the two years previous to the war in England were years of exceptional prosperity and unemployment had not been at so low a figure for twenty years Since, therefore, there were fewer people in need of assistance, it is very difficult to disentangle the era of prosperity from the effects of the Insurance Act The Insurance Act, moreover, touches the Poor Law only where the Poor Law touches the sick wage earner In Manchester, a large cotton center, the actual number of payments of the Poor Law aid, outside of the workhouse, have decreased 30 per cent The total number paid had decreased 25 per cent in 1913, as compared with the previous year Among the Liverpool dock laborers, who are wretchedly paid, it is estimated that in half of these cases which received the sickness benefit under the Act the families would have been broken up and relief under the Poor Law workhouse sought, if it had not been for the benefits of the Insurance Act The figures for all England and Wales show that the application for relief on account of sickness or accident outside of the workhouse have decreased nearly 15 per cent in January, 1914, as compared with the previous year The cash sick benefits, therefore, had a very real effect in reducing the claims for Poor Law aid

MATERNITY BENEFIT

The maternity benefit of $7 50, payable to the wife of each insured workman has had an even more marked effect In the Poor Law Unions of London, the orders of attendance for midwives had decreased 60 per cent in 1913 as compared with 1911 The London Poor Law Union shows a diminution of 20 per cent in the calls for the parish doctor in the year 1913 as compared with the year 1911 The Poor Law can thus be said to be relieved by the Insurance Act. This, however, was in the case of the wage earners who are least affected by the Insurance Act, for most of the classes that are affected by the Poor Law are not those insured. Under the Charity Organization Society the guilds of help touch a different stratum of the working population and one which is more largely insured. It is found in this group that in some cases the money from the Insurance Act was only adequate to meet the needs of the families. The Bradford Guild of Help found the per capita amount paid out in 1913, as compared with 1912, was nearly one third less, so that the Insurance Act definitely reduced not only the number of cases but the amount of final aid necessary.[18]

---

[17] Devine, E T Pauperism, An Analysis N Y School of Philanthropy Studies in Social Work, Nov 9, 1916

Another reaction is interesting, that some families who formerly resorted to the Poor Law now applied to the voluntary organizations, because with a sick cash benefit they are able to get along to a certain extent where previously they could not get along at all, and also they are applying for aid during convalescence. This increase, according to Miss Halsey, is attributable both to the ability of the insured to pay in part for this hitherto impossible luxury and to the increased medical attention now received by the industrial workers. It is further said that the increased number of operations, the pressure on hospital wards, the doctors' encouragement of a period of rest and recuperation are the undoubted causes of expansion in this field of charitable work. Where the Act is increasing work, it means that the Act has brought a new standard of treating sick persons, even though they may need some charitable assistance. Although these British hospitals are not legally a part of this Insurance system, they are very closely affected by the Insurance Act. The first, and one of the most important changes, has been the decrease in the number of outpatients. That decrease has come about because about one quarter of the outpatients are insured persons. These insured persons when they come with something which their panel doctor is able to care for, are referred to the panel doctor, and in the large London hospitals this decrease amounts to about 2 per cent. That the decrease is not greater is due to the use of the specialties—that is, the Roentgen ray and the departments for ear, eye and throat, this being work which the general practitioner cannot handle. The increased use of special departments is definitely stated as being due to the more general use of physicians by a large part of the population, many of whom have not been able to afford this luxury. In the London Hospital, the largest hospital in London, the increased number of patients who come with letters from their doctors amounts to about 50 per cent. A far larger proportion of insured persons come with letters than of the noninsured, due to the fact that the panel physicians found that the insured needed hospital treatment which they were unable to give. Moreover, it was noticed that an increased number of patients was admitted to the hospital wards from the outpatient department, showing also that a larger number of out-patients than was supposed were very seriously ill.

Another phenomenon noticed is the reaction of the maternity benefit on maternity work of hospitals. As a result of the mother's increased ability to pay for assistance, the outpatients in the maternity departments of the general hospitals in London decreased some 13 per cent in 1913 as compared with 1912. In the maternity hospitals themselves a similar decrease of in-patients occurred while the out-patients decreased 31 per cent. It is evident, therefore, that the Insurance Act with its benefits of medical aid, sickness and maternity benefits in cash, has reduced the amount of charitable assistance necessary to the wage earners in England and is also serving to increase the standard of medical care given to the wage worker.

It is evident from the above figures that the economic position of the wage workers in England has been improved by the Insurance Act. This is definitely seen in the reduction of the Poor Law relief and also in the reduction of charitable medical services as seen under the effect of maternity benefit. The workers are evidently able and willing to pay for services under this insurance law with its cash benefits for which they formerly were forced to seek in charity. It is evident, therefore, that under these insurance laws economic conditions for which they formerly were unable to provide can be taken as routine hazards. There is no question, also, from the above figures, that improved medical care has been given to the wage earners and that with improved medical care there must necessarily be improved health and an improved economic welfare. That this is so is very evident from the following personal communication from James Neal, Deputy Medical Secretary of the British Medical Association, to the Chairman of the Social Insurance Committee:

> Speaking generally I should say that the insurance scheme has effected an improvement in the economic condition of some of the people it was designed to benefit in that many—and this especially refers to women workers—who previously could not afford medical advice and treatment now have it provided for them, and who even if formerly able to obtain medical advice were frequently prevented from following it as they could not afford to stay away from work, whereas now they are assured of a certain sum (sickness benefit) per week which enables them to take advantage of the medical advice given them. The question as to whether or not the insured population is satisfied with the medical care provided under the Insurance Scheme is a little difficult to answer definitely. Generally, however, I should say that they are satisfied, so far as it goes. There is an undoubted feeling on the part of insured persons that the scope of medical benefit should be extended. So far it is limited to those matters falling within the competence of a medical practitioner of ordinary skill. This limitation is of course purely a matter of finance as at present there is no money to pay for operations and specialist services though had it not been for the war it is believed a move would have been made in that direction.

OLD AGE PENSIONS

It has already been pointed out in discussing the old age pensions in Denmark that at times the important effect of some social insurance laws, such as the old age pension given in Denmark in 1891, was to cause a diminution immediately of the amount of poor relief necessary, and for five years, up until 1896, this expectation was fully realized. Since then however, in Denmark, the expenditure for poor relief has steadily increased. This is probably due because new standards are formed when once the standard of absolute destitution is passed, and in the beginning most of the insurance pensions given abroad have been only enough to prevent starvation and keep body and soul together. They have not been enough really to live on. Doubtless as the years have passed, public opinion has realized—and the state has acted accordingly—that if anything was to be done there should be sufficient given to enable a person to live and not deteriorate under the stipend given. This has been done probably by the state increasing its relief rather than guaranteeing to furnish an increase of pension. Whether or not the social insurance laws can be said successfully to reduce permanently poor relief is a very difficult question to answer. The immediate results in England and Denmark were that it was. In a very comprehensive investigation in Germany twice by the German union for care of the poor in 1895 and 1901 and again under the German Imperial Statistical Office in 1894, this question was very carefully studied. The results obtained from their investigation were not sufficiently conclusive one way or the other. In some communities it seemed evident that the care of the poor had been relieved by workmen's insurance and in other communities no such effect could be seen. The truth probably lies in the fact that no system of poor relief has ever actually met the full need of what was required of it. Until a clear cut differentiation can be made between poverty and pauperism—the first relievable, the latter not—the question will remain unanswered. The state must care for its pauperism by other means than insurance. It is evident, in England, that the first reaction of the insurance law was distinctly and clearly to relieve sickness and poverty. Both can be relieved and the effects of both can be controlled by social insurance laws.

LABOR EXCHANGES

The effect on unemployment and labor of the British system of labor exchanges can be seen in a small degree. The Insurance Act forced the payment of the benefits of unemployment through the labor exchanges, making the exchange the corner stone of the edifice, for no payment is payable unless proof exists that the claimant is desirous of working, if work of a suitable character can be found for him This means an obligatory use of the labor exchange, for it is the only possible test of willingness to work that can be sanctioned by the state"[19]

---

[18] Halsey, Olga S.: The Reaction of the British Health Insurance on Existing Charities. Proceedings of the New York Conference on Hospital Service 3, 1916.

One very important factor of these labor exchanges has been the decasualization of labor It was found in the harbor cities of London and Liverpool and in many manufacturing centers that the normal margin of unemployed labor consisted of men who never worked more than a few days at a time, earning wages that sometimes were fairly good as reckoned by the hour, but insufficient to maintain themselves and their families in health By recruiting this labor at a central labor exchange instead of at the door of each employer, the total volume of available work was distributed in such a way as to give regular or nearly regular employment to the previously casual worker Of course, some by this method went entirely without work, but they were the most unfit and practically drifted out of the field and were practically those who were suffering from unemployment and disability to work The cloth porters of Manchester and cotton porters of Liverpool were treated in the same way so that through the labor exchange these men obtained steady employment for several employers each week, instead of wastefully wandering round and losing jobs which they might have had through ignorance of where to go

Another feature of the scheme was the payment of advances of wages to men who were not accustomed to waiting for the weekly pay day by sums deposited in a clearing house for this purpose by employers at the beginning of each week A diminution of the seasonal effect has also been brought about through the exchanges by arranging with big corporations to save some of their work that could be done on optional time for the slack seasons and arranging with the supplying of labor to the fruit and hop pickers

The exchanges also have proved of great value in organizing the female labor market during the war The increase in female labor in some of the exchanges has amounted in 1914 to 60 per cent, in 1915 to an increase of 89 per cent, in the month of January, 1916, the increase of women working was 131 per cent over 1915 for that month, and the men diminished 41 2 per cent

Another effect of the labor exchange has been to steady the work of the boys and girls beginning work by keeping those who show an aptitude steadily on the job and helping those who do not show aptitude in their given work to other positions

The employers appreciate greatly this new method of marketing labor for they have been able, through the exchanges, in the north of England, to obtain workers from the south of England without delay The writer concludes that the labor exchange has fully proved itself as a useful instrument of the highest value It has brought thinking persons, both of the employing and working classes, to a fuller realization of the many misfits, hardships, physical and mental breakdowns which could be avoided by a more careful selection of employees on the one hand and positions on the other It has provided the nation with reliable data on the state of employment comparable for different times, different trades and different localities on a sufficient scale to permit of safe deductions It has helped the scientific analyses of the problem of unemployment and thereby brought appreciably nearer its final solution The British system of labor exchanges has slightly yet distinctly reduced unemployment

STATE COMPENSATION LAWS COMPARED

What is the situation in this country at present? We have in thirty-eight states of the Union workmen's compensation laws designed theoretically to protect the wage earners against the effect of industrial accidents With these laws there has been a change of legal conception regarding injury The old Anglo-Saxon idea that proof must be brought forward to show where the fault for the accident lay before compensation could be given to the person injured has been changed to a conception that not because of fault should the injury be recompensed but because of the injury, and the industrial development of the country has finally come to realize the fact that human injury, disability and death should be charged to the industry that produces this wastage The Social Insurance Committee has undertaken, through Dr Rubinow, a comparative study of these compensation laws in the various states This study is now in print From a careful reading of these laws as at present administered it is very evident they are designed chiefly to protect the employer against suits for damages, to give the casualty insurance companies a generous profit They are designed to give a more speedy return for damages than formerly, to undertake the responsibility of permanent disability by money recompense, and they are designed to do this at just as low a cost to the employer and insurance company as it is possible to do This would be just and fair provided adequate care were given to the injured and a fair recompense and just dealing were given to the surgeon In many of these laws only a pretense of adequate care or justice to the surgeons exists The injustice of these laws has done more than anything else to array the medical profession against all social insurance legislation

The laws in most states give a certain arbitrary amount of care and expense It throws all the rest of responsibility on the injured workman where it is unjust that it should be placed, and it throws the really adequate care of serious injury on to the charity of the medical profession, which is equally unjust

In Rubinow's standard accident table (considering only those accidents which caused disability on some other day besides the day of accident) out of every 100,000 cases it is shown that the period of temporary total disability has not expired

After 7 days in	62,504
After 14 days in	38,218
After 21 days in	25,692
After 28 days in	18 479
After 56 days in	6,043
After 91 days in	2,204

Taking some of the states, therefore, such as Texas for example, where the time limit that care can be given to the injured is seven days, nearly two thirds of the accidents are still disabled when the employer's or carrier's responsibility for the care ceases Rhode Island, Iowa, Louisiana, Vermont, Montana, New Jersey, Hawaii, Maine and Pennsylvania cease to care for their injured after fourteen days, which leaves over one third still to be cared for and, as a matter of fact, nearly two fifths Moreover, in these states, Montana, New Jersey, Hawaii, Maine and Pennsylvania allow for the entire care of $50 in the first three, $30 in Maine and $25 worth of medical and surgical care in Pennsylvania The shortness of the time in which recovery must take place is only equalled by the parsimony of the amount allowed for the medical treatment, for the care of the seriously injured Alaska, Washington and Wyoming make no provision at all for medical care Arizona, Kansas and New Hampshire give no medical aid, except the cost of the last sickness If they are sure the man is going to die, they are willing to give some medical and surgical aid Here, there is no appreciation of the value of recovery of economic efficiency or of the value of the laborer to the community

At the other extreme, no time limit is set in the Canal Zone, under the United States service, Connecticut, California, Massachusetts, Oregon, West Virginia, Ohio and Maryland, and no money limit is put in the first five named Oregon and West Virginia, Ohio and Maryland limit the amount from $300 to $150 Other states give a time limit of care, such as Nevada, 120 days, Wisconsin, Minnesota and Kentucky, 90 days, New York 60 days, Porto Rico and Illinois, 56 days, Indiana and Colorado, 30 days, and Michigan and Nebraska, 21 days, and vary their money limit from none to between $100 and $200 When the limit of care is kept up for eight weeks, or sixty days, the number of accidents left uncared for is very much smaller, and after thirteen weeks have expired—which is the limit of care under accident laws in Germany—only about 2 per cent remain

---

[19] British System of Labor Exchanges, Bulletin United States Bureau of Labor Statistics, No 206

The cost of medical aid in these cases is interesting and the experience of Ohio will best bring it out Ohio has no time limit for its medical benefits and the money benefits are set at $200 Only 1.2 per cent of the cases cost Ohio for medical aid over $50 during the period of March 12 to September 15, and although during a later period there seems to be a rise in cost of medical aid, the proportionate cost did not rise above 2 per cent The tables in the Ohio report show that if the medical benefit granted is unlimited in time, only four cases out of a thousand will be affected by the money limit of $100, only two out of a thousand by a limit of $150, as in Maryland, and only one in a thousand by a limit of $200

Great stress is laid in certain publications on the amount of medical fees received under these compensation laws As a matter of fact, in the early days of the laws the ratio of medical fees which become immediately due were calculated to the amount paid out of immediate insurance, leaving out all ratio of outstanding insurance and disregarding also the ratio in proportion of wage expenditure That is, all compensation insurance charges are calculated in proportion to the pay roll exposed. For instance, the Massachusetts figures, in the first group given, cover a wage expenditure of some $505 000,000 and for the second period some $395,000,000, making a total of $900 000,000 on perhaps 1,800,000 annual workers Expressed in this proportion to the payroll exposed, the cost for the first period was 7½ cents per $100 of wages, and during the second period 9½ cents, and for the entire period about 8½ cents or on an average wage of $600, 51 cents per worker A very large body of experience of the most important casualty companies seems to indicate that as against the Massachusetts cost of 8½ cents per $100 of wages, the cost in Michigan was 10 8 cents and in Illinois 13 cents and in New Jersey only 6 4 cents This does not support the much talked of medical graft of the subject

Compensation for Physician's Service

There is no question that these laws have brought out the fact that the payment of injury, according to fee bills, is neither just to the injured one nor to the medical profession You cannot gage injury or medical care to the seriously injured individual on the law of averages and bring justice either to the injured or to the physician At present the method of paying for medical compensation puts a premium on careless medical work and does not put a premium on the best work There is no question that in the near future some new method of compensation must be devised by which the relative amount of economic efficiency retained by the worker shall be one basis of payment and the rapidity with which the patient goes back to work shall be another consideration, and injuries shall also be considered in ratio to the severity of injury and the condition of their infections

This is not a purely theoretical consideration, but is possible of attainment, and a committee of the Medical Society of the state of New York has already been appointed for taking this under serious consideration This subject, together with a discussion of the necessity of free choice by the patient of a physician, is fully discussed in the report by Dr Rubinow to which those wishing further information are referred

Voluntary Welfare Work

A very noticeable feature in this country is the enormous increase of voluntary welfare work among the big industrial establishments by which they are endeavoring to improve the social and economic condition of their wage earners Among many establishments there have been formed establishment funds which take up the question of insurance, of accident sickness and even old age and retirement pensions, among their individual employees Some of these are on the mutual benefit plan by which employees permit a certain deduction from their wages which gives them a beneficiary right to the advantages obtained while others have certain benefits given outright by the employers The pension funds of some of the big railroad companies are on a noncontributing basis of the employees They are purely and simply the rewards given by the employer for services well done

Unemployment

We have shown under the statistics of unemployment tremendous fluctuating employment in this country and the tremendous fluctuations of seasonal occupations and the variations between good and bad times At present, and in all probability in the near future, this country will have less and less unemployment and there is no question that with the war and with the destruction of life and peoples in Europe, in the very countries from which, in recent years, this country has drawn its vigorous, unskilled labor, the immigration which has come to these shores so abundantly will enormously diminish and there will be a dearth of labor and a rise in wages At present, however, there is no question that even in good times the wage earners of this country are unemployed for from one fifth to one fourth—20 to 25 per cent.—of the working days of the year Those that are dependent on their daily wages have thus to consider a further diminution of what is apparently their actual wage All investigations on the amount of wages have shown that about four fifths of the men and nineteen twentieths of the women earn less than $600 a year to support their families, and this amount of wage is not able, even in this country, to support these families on a fair standard of living This is one cause of the enormous mass of woman and child labor Some years ago, in the investigation on living wage by R C Chapin, in New York, it was shown that an income under $800 a year is just sufficient to permit the maintenance of a normal standard Anything below this amount means that the difference must be eked out by taking boarders into the family or by the labor of the women and the children

Wages and Expenses

An increase in wages will not entirely compensate and care for the extra hazards of life, for even with the steadily rise of wages in this country since 1899, taking the wages of that year as 100 6 per cent (as has been done by Rubinow in his computation of the value of real wages) the weekly earnings from 1899 at 100 6 per cent. have steadily risen to 131 6 in 1912 But the retail prices of food have risen since 1899 from 100 8 to 154.2 in 1912, so that the purchasing power measured by retail prices of food has dropped in 1912 to 91.8 per cent., if calculated by hourly wages, and if by weekly earnings, wages have dropped in purchasing power, in 1900, from 100.2 per cent to 85.3 per cent in 1912 These figures are for this country before the war prices of the present moment were in vogue and show that while a rise in wages has occurred, the purchased power has diminished so that today the hazards of life of the ordinary wage earners bring a still greater strain on the income of the working classes

It is more and more a fact that individually these are more difficult to be borne, and it would seem that in the near future it would be the part of wisdom to undertake some collective steps, such as insurance, to protect those of the population who need it the most. It is a noticeable feature that all official bodies or commissions that have been appointed to study this subject, as the California and Massachusetts Commissions, have reported in favor of these social insurance laws in principle and have particularly drawn attention to the necessity and wisdom in the near future of protection against the hazards of sickness

Poverty and Sickness

How much sickness is apt to change poverty into destitution was shown some years ago by Edward T Devine[20] of the principal disabilities present in 5,000 dependent families in New York Unemployment was the principal disability in 69 16 per cent. Chronic physical disability, other than tuberculosis or rheumatism in 27.3 per cent., temporary disability, other than accident or child birth, 19 68 per cent Tuberculosis was in 12 38 per cent. and rheumatism in 6.94 per cent. Thus the chronic disability, including tuberculosis and rheumatism, was present in 46 62 per cent., and the temporary disability, including childbirth at 7.26 per cent. and accidents at 3 96 per cent., was in 30.9 per cent. of the cases Destitution through lack of economic powers of old age was in

---

[20] Devine, Edward T Misery and Its Cause p 204

12 per cent It is a noticeable feature, however, that the characteristics of the real pauper—laziness, shiftlessness, intemperance, unreliability and the disposition to beg and mental disease and deficiency—occurred in 44 64 per cent of these families

The more recent figures in California, giving the cause of destitution in 5,296 cases, state that 2,652 were caused by illness and unemployment, low earning capacity by 1,816, illness in members of the family was responsible in 234 cases Illness of the wage earner was the direct and sole cause in 911 cases In almost one fifth of the cases in which illness was found, pregnancy of the woman was the chief reason for application for help Medical attention and financial assistance were both needed as the woman was unable, because of her temporary physical handicap, to do her part in the support of the family In 11 per cent of all the cases applying for help because of sickness, tuberculosis was the specified disease

The California Commission further states that

> The burden of serious illness is sending married women with children to work It is causing many honest and conscientious wage workers to go without sufficient food and clothing It is forcing an increasing number of families to become recipients of medical and general charity In the endeavor of the wage earners of California to protect themselves, it was shown that little more than one third of the wage earners of the State are protected through voluntary efforts A great majority of the one third are the better paid workers and not those of the smaller earning capacity who are in even greater need of protection

It is useless to pile up statistics These are fair examples of what can be found throughout the United States They are well gathered together and put forward in Warren and Sydenstricker's report in Bulletin 76 of the Treasury Department

Again in studying the possibility of the purchasing power of the wage earner's income, Nearing[21] states that

> To those whose incomes are recorded in thousands of dollars, incomes of hundreds of dollars seem insignificant, yet it is true that among the wage earners engaged in American industry, not more than one in ten has an annual income of $1 000 and over, while fully half fall below $600 The vast majority of wage earners must therefore estimate their incomes in terms of hundreds The individual budgets, cited in the appendix which might be duplicated at will, in tens of thousands of instances bespeak eloquently the economic struggle of those who do the work of the modern industrial world

The effect of all this at present on the medical profession is that they must turn to the charity of the physician to receive adequate care when illness comes on them The majority of wage earners cannot afford to employ their own physician and retain the relationship of physician and patient which the more fortunate in life enjoy

Dispensaries in New York City

No adequate study of the dispensary figures and situation in any large city has been given out For that reason the Social Insurance Committee undertook an investigation recently in New York City as to the dispensary situation in the year 1915 The following figures obtained are of interest

The number of dispensaries in New York City is 106 The number from which reports could be obtained was ninety-two The population of New York City in 1915 was 5,468,190, the number of patients treated in ninety-two dispensaries was 2,211,437 One of the dispensaries unwilling to make any report was one of the largest in the city, working on the east side among the poor These figures, therefore, understate the realities rather than exaggerating them The number of visits paid by these patients in 1915 was 4,050,036 The number of patients per hundred of the population treated in the dispensaries was 19 6—that is, practically one fifth of the entire population of New York City was treated that year in its dispensaries The number of special dispensaries treating all diseases was forty-nine and special clinics, thirty-five Eight dispensaries made some specified exceptions to the diseases which they treat The charges made in these dispensaries for the first visit in 17 dispensaries was 15 cents or over, in 51 dispensaries, 10 cents, and 3 dispensaries charged 5 cents No charge is made in 21 dispensaries The charge for subsequent visits is 9 dispensaries charged 15 cents and over, 42 dispensaries charged 10 cents, 1 dispensary 5 cents, and there is no charge in 40 dispensaries Ten per cent of the dispensaries charged 15 cents or over for their continual treatment and the remaining 90 per cent were equally divided between no charge at all and 10 cents Prescriptions were charged for in 32 dispensaries over 10 cents, in 35 dispensaries 10 cents and under, in 15 dispensaries prescriptions are free, and there are various charges in 10 dispensaries

Working in these dispensaries are found 3,031 physicians of the 8,000 physicians in New York City That is, 37 5 per cent or three eighths of the entire physicians of the city work in these dispensaries, giving their services in the majority of cases for nothing The two following tables of the distribution of patients according to specialties and the distribution of visits according to these specialties are particularly interesting

DISTRIBUTION OF PATIENTS ACCORDING TO SPECIALTIES
(Data available for 1,014,000 patients)

Medical class	221 000	or	21 8
Surgical class	188,000	or	18 5
Pediatrics	94 000	or	9 3
Gynecology	47,000	or	4 7
G U and Skin	79,000	or	7 8
Neurology	23,000	or	2 3
Eye Ear, Nose and Throat	209,000	or	30 5
Orthopedic Surgery	29,000	or	2 8
Dental	24,000	or	2 4

DISTRIBUTION OF VISITS ACCORDING TO SPECIALTIES
(Data available for 2,988 000 visits)

Medical class	604,000	or	20 2
Surgical class	574 000	or	19 2
Pediatrics	215 000	or	7 2
Gynecology	163 000	or	5 5
G U and Skin	332,000	or	11 1
Neurology	130,000	or	4 4
Eye Ear, Nose and Throat	790 000	or	26 5
Orthopedic Surgery	92 000	or	3 1
Dental	86 000	or	2 0
Total	2,988,000		100 0

It is seen in these tables that two fifths of the patients are in the general medical and surgical classes, that is, about equally divided between the two The general medical class, therefore, takes one fifth of the patients and practically one fifth of the visits Surgery takes practically the same The eye, ear, nose and throat classes take practically one third of the patients and 26 5 per cent of the visits It is seen, moreover, that one half of the patients go to these dispensaries for treatment in specialties which the general practitioner does not give them, for putting pediatrics into general medicine and classifying that the ordinary practitioner shall be an old-fashioned practitioner of children and medicine and surgery is seen that 49 per cent of the patients come for these three classes As a matter of fact, however, surgery is today a specialty and under any social insurance laws the surgeon would have to be calculated and treated as a specialist The general practitioner then, if he included the care of the children of the family, would be able to give 27 4 per cent of the treatment that was given to the people as in the general medical classes and to children The majority of care, therefore, desired by the people coming to these dispensaries is something which the general practitioner does not give and, in England, is not expected to give It shows, further, that the dispensaries in this country are gradually and unconsciously developing a sense of group medicine, because not only are the general practitioner and the various specialists represented in these dispensaries, but very thorough pathologic work and the work of clinical microscopy is extensively done Thirty-five dispensaries connected with hospitals used the pathologists in the hospitals Thirty-one dispensaries had special pathologists for the dispensary and in thirteen dispensaries the laboratories of the board of health were extensively used, although but four of the dispensaries under consideration were officially affiliated with the public health department There are over 12,000 blood examinations reported as part of the routine work of these dispensaries, over 15,000 sputum examinations, over 35,000 urinary examinations Fifty-two dispensaries had

---

[21] Nearing, Scott Financing the Wage Earner's Family, p 167

Roentgen-ray rooms which are extensively used for in the forty dispensaries reporting on it, 33,000 patients were roentgenographed using 57,000 plates

There is a further development in these dispensaries which is not given in these figures and that is development of the care of the patients in their homes by the physicians hired by the dispensaries There is a follow up medical care being more and more developed in New York City Probably the physicians are paid about $25 a month for this and the care is given free to the patient or for the same amount that is given while visiting the dispensary In other words there is a social development of medical care equivalent to that which would be given under sickness insurance and it is gradually developing on a charity basis This is but the logical conclusion of the situation and one that adds to the intricacies of any consideration of remuneration of medical fees under health insurance. A large number of these patients, probably 80 per cent., would be included in any sickness insurance law

It is self-evident that under the social insurance laws the economic condition of the medical profession is very deeply affected These laws cannot be promulgated without affecting the interests of the profession, because the medical profession is absolutely essential to the putting in practice of any of these laws Ewald very distinctly draws attention to the position of the German medical profession before these insurance laws went into vogue and the resultant effect on the profession after the laws were passed While in the main Ewald praises the principles of social insurance and the laws themselves he strongly condemns the unfavorable condition of the German medical profession due to a large extent to these same social insurance laws His point of criticism, however, is directed not against the principle of health insurance but against the particular provisions of the German law concerning medical aid especially the permission of salaried contracts between the funds and the medical profession He brings out very clearly the fact that previous to the passage of the insurance laws many of the physicians were giving at a very low rate of pay, part in charity and part to assist the workmen their services to the guilds and societies on which the big insurance funds were formed The law immediately placed the remuneration of the physicians on the same basis that they had given in charity, claiming if they could do that in charity they could have the same for a livelihood It was the same result as the fee bills have shown in this country, that a minimum fee of a fee bill immediately becomes in the eyes of the corporation dealing with the profession the maximum fee that can be charged for anything Another evil that proved a source of vicious results in Germany was the fact that the salaried physicians of the funds could not serve two masters They could not serve the funds on the business basis on which they were hired and serve the patients on the professional basis which they were expected to do Many scandals broke out by which it seemed that the physicians were in collusion with the funds to the great detriment of the professional care of the patients The question immediately therefore arose of the right of free choice of physicians by the patients, and Germany has been broadly split into two camps on the subject, the Leipsic group vigorously claiming for free choice and the Dresden claiming that better results were obtained by salaried physicians and no free choice or very limited free choice of physicians in a district Professor Ewald very energetically defends the principle of free choice of the physician and also the admission of every practitioner to the panel That is no limited panel at all, for Ewald very strongly believes and defends the principle of private practice in the exercise of the medical profession as a natural one that preserves the dignity of the profession and establishes the proper relation between physician and patient.

A great majority of the German profession, before the war broke out, was strongly in favor of free choice of physicians under the insurance laws The only physicians who were opposed to it were the small minority of the salaried doctors under the funds and a certain number of older physicians who were not in touch with the modern economic movement in the profession Although many funds, as I have stated above were very largely opposed to free choice this right to the doctor was slowly but surely gaining ground The Leipzig Union in Germany with a membership in 1910 of 24 000 out of a possible 32 000 in Germany, has, as one of its essential aims, the acquisition and preservation of free choice of the physician by the patient

In England, just previous to the insurance laws, the same condition was in vogue that physicians were treating many poor patients for a fee much less than they could possibly live on if it were the general fee of their practice Many physicians who cared for the members of the huge friendly societies were under a lay control, which prevented them from practicing their profession in an independent and dignified manner, for frequently in the disputes which arose between the physicians and societies, the same persons were the accusers and judges of the actions of the physicians

Poverty and destitution among the working classes in England were so extensive that medical practice was being performed on club rates and drifting rapidly into various vicious forms of contract practice When the law went into effect the rate that was offered the physicians was based in the first place on the reduced rates that the physicians had been forced to practice in their contract and charity work The same standard was applied to them as had been applied to the German physicians in the early instances of the insurance laws The whole plan of payment of the English profession was also one by capitation which practically was contract practice dignified by state approval Except in the towns of Salford and Manchester where, although they had only a definite sum from which they could draw for their payment the doctors insisted on choosing a method of payment per visitation and not per head per year This method has been acknowledged to have given more satisfaction to both patients and doctors than the capitation plan so generally in vogue It has given better service to the patients, it has given more satisfaction to the physicians it has kept the dignity and the position of individual patient to individual physician which private practice incurs, and has diminished that feeling of so much per patient per year so inevitable under the capitation plan The following extract is from a letter from James Neal Deputy Medical Secretary of the British Medical Association, to the Chairman of the Social Insurance Committee

> There is no doubt that when the Act first came into operation the majority of the profession anticipated that it would be unworkable but these anticipations have not been realized and for the most part the medical profession has found the Act far less objectionable than was anticipated It is still thought by many that the clerical work falling on the doctor is excessive and that insured persons demand treatment for trifling conditions for which apart from the Act, they would not seek medical advice. Part of the clerical work, the keeping of records has been dropped for the duration of the war Many practitioners consider that the extensive contract work which the Act brought about is detrimental to the best interests of the profession being of the opinion that it is impossible to get the best results from any form of contract practice Many also object to the element of lay control inseparable from any such scheme and to the disciplinary measures that have been introduced So far as I am aware the Act has not materially affected specialists consultants and operating surgeons but with a certainty of the extension of the Act so as to provide specialist treatment it is only a quesion of time before these classes will be involved
>
> The effect of the Act upon the incomes of panel doctors as compared with pre Act days depends upon the class of practice. General practitioners engaged in industrial areas where practically the whole population is insured under the Act have had their incomes increased but it must be remembered that the amount of work they have been called on to perform has also increased Formerly many people in industrial areas received their doctoring through clubs at cheap rates or received none at all and these are now of course included in the insurance scheme The practitioners who have suffered loss of income as compared with the pre Act days are (a) those who at the commencement of the operation of the scheme refused to participate in the work the result being that when they finally decided to join the panel the majority of the people who would otherwise have put their names on their panel lists had already selected some other doctor and (b) those who have remained off the panel and who previously attended at private fees people who now obtain their medical attendance and treatment through the insurance scheme.

In the annual report of the Council of 1913-1914 of the British Medical Association there is a report of a committee of the British Medical Association appointed to consider in what way the Association could best promote the interests of the members who have refused to enter into agreements of one state fair, for 1917, explains the practical use to which this record sheet is to be put

Class No 172 Noncompetitive Class (without Score Card):
2547—Boy 36 Months and under 48 Months
2548—Girl 36 Months and under 48 Months

A record sheet prepared by the Children's Bureau will be used A full physical examination is made of each baby, a printed blank is filled out, giving the results of the examination and notes with regard to the individual needs of each baby This record sheet is given to the mother

In this class no attempt is made to compare the development or condition of different babies the object of the examination is rather to center the attention of the mother on the qualities and needs of her own child, to teach in a practical way the facts with regard to the care of babies, and point out the sources of assistance in making or keeping the baby well No treatment or prescriptions are given, where there is need for either, reference is made to the family physician or dentist, to specialists, or, where the parents can not afford private care, to clinics and hospitals

No prizes are awarded but a ribbon will be given to each baby examined

Perhaps the greatest new possibility for our committee in this year's work has come from our connection with the General Federation of Women's Clubs Within that federation there is a department of public health which in its turn is divided into four divisions, one of these is child hygiene, and it has been my great opportunity, as chairman of that division, to submit a program and recommendations for the work of 1917-1918 This material appeared in the General Federation of Women's Clubs magazine for April, 1917, and will be incorporated in the handbook of the Committee on Public Health of the General Federation Through these two avenues we are able to come in direct touch with 2,000,000 women of the United States The program and recommendations follow

There are only eleven states which already have an adequate vital statistics law We recommend that these states work along lines suggested by their own state registrar, such as investigating the cause of their death rate, establishing child welfare stations, making surveys, and working toward securing a child hygiene division either under their state board of health or university extension

For the states which do not have an adequate law we submit the following program for the first day allowed us in the club year book May we keep constantly in our own minds that we rank with Turkey and China in not having adequate registration laws, that it is a rebuke to our national intelligence and pride that we can only guess approximately the number of deaths and births in our country, and that *no efficient infant welfare work can be done* until we know where the babies are and how many there are

BIRTH REGISTRATION

1 A spot map of localities *showing results of test* in birth registration (Census Bureau)

2 Devices and *campaigns to awaken interest* (See "Birth Registration Test," Children's Bureau, pages 4, 5, 6)

3 Why the "model bill'? (See "Why Births and Deaths Should Be Registered American Medical Association)

4 *Cooperation with state and* local health officers

5 Relation of birth registration to infant mortality (See Infant Mortality, 1915, Children's Bureau See pamphlets issued by American Association for Study and Prevention of Infant Mortality)

6 Birth registration and child labor (See 'Birth Registration Test," Federal Bureau See "*Study Course on* Public Health," Program XIV, American Medical Association)

The second day in the calendar can be devoted *to the question* of baby health conferences, *with a view* to establishing permanent local, county, and state stations or bureaus

BABY HEALTH CONFERENCES

1 Demonstration *of measuring* babies normal and subnormal types presented

Suggestion to Committee

Experience has shown that the most effective way to make these demonstrations count is to secure two babies, one as near the normal type as possible, the other with as many remediable defects as possible *The latter can* often be secured from some charitable institution One nurse and one doctor are necessary to conduct *the* demonstration Score cards should be *in the* hands of the audience during the demonstration

2 Discussion of score card and *anthropometric* table See American Medical Score Cards American Medical Anthropometric Table Record Sheet (same as used by federal bureau) Baby Week Campaign (issued by the federal *bureau*)

Suggestion to Committee

If practicable, this topic should be combined with the explanations accompanying each measurement If this is not possible, it should follow immediately Questions and discussions *should* be encouraged from the audience Under this *discussion* the necessity of parents having an anthropometric table can be brought home. For example, a child should, at a given age, weigh a certain number of pounds according to his height, and the circumference of his head, chest and abdomen should be proportionate, *if not*, the cause should be ascertained This discussion is of utmost importance, as it is one that will lead most *effectively* toward the establishment of permanent conference stations

3 Mental Development, Binet Tests above 3 years of age Mental Tests below 3 years of age (See American Medical Score Card American Medical Baby Health Conference, Pamphlet 5)

Suggestion to Committee

This topic is given because it is the part of the measuring and scoring least understood and most criticized Practically every *normal* baby will respond in varying degrees of promptness and accuracy to the tests offered, but the subnormal *or mentally backward* child invariably fails to respond The test, as it now stands, is far from satisfactory in marking the fine points of difference among normal children, but it is of greatest accuracy and value in determining the subnormal child's deficiencies Both physicians and parents have misunderstood and undervalued these mental tests

4 Care of Mother, Rural, Town, City (See Prenatal Care, by Mrs Max West, *Children's Bureau* Maternal Mortality, by Dr Grace L. Meigs, Children's Bureau Leaflet No 1 Prenatal Care Record by American Association for the Study and Prevention of Infant Mortality)

Suggestion to Committee

Especial attention should be called to the condition of mothers in *rural districts and in small towns where tradition keeps the mother* at her usual work until the birth of child and sends her back too soon afterward Scarcity of *servant help*, and ignorance of results make this condition often as threatening as in the slum districts of the city where the mother must of necessity work in factories or away from home Many times *the actual physical labor of the mother in the* rural districts equals that of the much talked of slum mothers, and the *results on the child are less harmful only because partly counteracted by pure air and better food*

Distinct from these two days of regular club work on child hygiene, we wish to recommend most earnestly the observance of Baby Week If the week set apart by the Children's Bureau is not advisable in the community, another may be substituted if a week is impossible at least *observe one day* By *all means* cooperate with the federal bureau in this matter This bureau has a baby week pamphlet which gives suggestions suitable, by modifications, to any locality

We feel *that when these two lines of work are well accomplished* and the results achieved, many other things for which our department stands, such as housing conditions, food supply and public utilities in municipal *and rural life, will have received material aid*

In the localities in which the foregoing programs and suggestions are difficult to follow, we recommend "An Outline for Study Course on Public Health, *prepared for the use of Women's Clubs*" by a joint committee from the American Medical Association, and the Home Economics Department of the General Federation of Women's Clubs The parts *of this particularly suited to a child welfare program* are Program III, Subject, "*The Cost of Food*" Section B Program IV, Subject, "The Care of Food", Program VIII, Subject, 'Control of Communicable Disease," Sections A, B and D Program IX, Subject, Cost of Preventable Disease" Each of these is accompanied with a good bibliography The outline can be obtained from the American *Medical Association, 535 N Dearborn St, Chicago, Illinois*

During the past year all orders for contests and conferences have been filled by Dr Frederick R Green, secretary of the Council on Health and Public Instruction, from the Chicago office *From our own office* we have sent sample material only

The Central Committee, who have given us valuable and steady assistance for this year, *is composed of the following* members L. Rosa H Gantt, M D, Spartanburg, S C, Samuel Jay Crumbine, M D, Topeka, Kan, Mary G Haskins, M D, Detroit, Gladys Cooper, M D, Red Oak, Iowa, Grace L Meigs, M D, Washington, D C, Phoebe Van Voast, M D, New York, *Margaret* V Clark, M D, Long Beach, Calif

The Score Card Committee is as follows Henry L K Shaw, Albany, N Y, Velura E Powell, Red Oak, Iowa, Josephine Baker, New York, Howard Childs *Carpenter*, Philadelphia

In conclusion, we wish to call especial attention to the following classes in baby health contests, as those most effective in their remediable effects, and in consequence most desirable to center on initial examination, improvement class, and the noncompetitive class, explained before *in* this report

Again may we point to the fact that conservation of child life, health, and development has never been such an insistent factor in the world's history as at the present time The difficulties and responsibilities of our committee have been daily borne in on us with increasing urgency in the last two years, and have grown especially heavy since the declaration of war by our own country We, *therefore*, wish to express our appreciation to the Council for their sympathetic and unlimited support

Respectfully submitted

Lenna L Meanes, *Chairman*
M L Turner, Secretary

Committee on Cooperation with the National Education Association

Council on Health and Public Instruction

Feb 27, 1917, the committees appointed by the American Medical Association and the National Education Association for the purpose of investigating sanitary conditions of rural schools and suggesting improvements met in Kansas City, Mo Resolutions were passed, advising the publication and circulation of the fifty charts prepared by Dr Thomas D Wood and that they be printed by the American Medical Association press at Chicago U S Commissioner Claxton subscribed for a large number for the government

February 27 in the Auditorium of Kansas City Drs Wood Dodson and Green, and Commissioner Claxton addressed the superintendents and requested that they use their influence in securing a fund at the meeting of the National Education Association in July, 1917 at Portland, for the purpose of continuing the work of the committees

At the meeting on this date a resolution was passed also asking that the American Medical Association committee use its influence to secure a fund at the meeting of the American Medical Association, in June, 1917, for the same purpose

In Southern Colorado an important step has been taken in the rural schools this year toward protecting the teeth and health of the schoolchildren In the coal camps an eye, ear nose and throat specialist has been appointed to examine and treat the schoolchildren of these schools Also dentists and special nurses have been appointed and are at work among the schoolchildren of the camps treating and repairing teeth and teaching mouth hygiene

At these camps visiting nurses have been appointed who devote their entire time to teaching hygiene and sanitation in the homes of the miners This work is having a decidedly beneficial effect on the health of the community, and does much to improve the schools

Owing to the importance and timeliness of first aid work classes in camps and schools are being continued Through the Extension Division of the University of Colorado, twenty-one classes in first aid have been organized local physicians being the instructors The American Red Cross cooperates by giving its certificates to all who pass the examination of the course

Architecture of schoolhouses has not been lost sight of and whenever possible the importance of properly constructed schoolhouses has been emphasized giving the unit schoolhouse as an illustration with its faultless lighting and ventilation A number of schoolhouses have been built this year in Colorado on the unit plan

During the past fall and winter I have given health and other talks mostly illustrated with lantern slides, at Sunrise, Wyo, and the following places in Colorado Morley Florence, Canon City Trinidad, Boulder (University of Colorado, School of Medicine), La Junta, Salida, Colorado Springs, Primero, Walsen, Beulah, Denver (Baby Show, Medical Society, Delphian Society, and High School, East Side) and Pueblo (Crews-Beggs D G Store, four lectures, Colorado Supply Company Store, Railway Y M C A., Carlile School, Civic Federation Club, South Side School Centennial School, Minnequa Congregational Church Pueblo County Medical Society Nathan B Forest Literary Club, Norton Art Club Daughters of the American Revolution and Minnequa Hospital)

Respectfully submitted.

R. W Corwin, Chairman.

Committee on Conservation of Vision

Council on Health and Public Instruction

At the Minneapolis meeting of the American Medical Association a Conservation of Vision Committee of the Council on Health and Public Instruction was formed and I was requested to assume the chairmanship This I reluctantly consented to do, for I was well aware of the fact that my other duties left no unoccupied time at my disposal for the performance of Conservation of Vision work. By making many sacrifices, however, and by the expenditure of about $600 a year out of my own pocket I have done what I could and trust it has met with your approval The work is before you and you know about what it is Up to Jan 1, 1917, the American Medical Association has given $600 a year for the support of the Committee Owing to financial reverses this income stopped Jan 1, 1917, and since then the support has proceeded from the Academy of Ophthalmology and Oto-Laryngology and myself The American Medical Association has always paid for our printed matter which has, of course, been of great assistance The American Medical Association has also furnished a box of stereopticon slides for each state for lecturing purposes

We appointed state managers in each state, whose duty it has been to perfect a state organization and report once a year to our committee Wherever possible, the state managers have also been made chairmen of the Conservation of Vision Committee of the various state medical societies In this way, harmony in work has been secured These state managers have secured the services of well-known oculists in various portions of their states, who have agreed to go and lecture in neighboring cities whenever invited Their expenses have usually been paid by the society issuing the invitation although many men have paid their own expenses, thus sacrificing both time and money in the enterprise The state managers have arranged for lectures before medical societies, women s clubs teachers' institutes, normal schools etc, and thus far about 500 000 people have listened to these lectures We have positive assurances that much good have followed the lectures Among such benefits may be mentioned medical school inspection school nurses, schools for defectives better shop conditions, the abolition of the "shop oculist and common towel in many factories, active work in the passage of laws for ophthalmia neonatorum, trachoma wood alcohol shop conditions schoolchildren's eyes, etc. Our Committee has also been instrumental in having lectures delivered in medical schools by the professors of ophthalmology on visual conservation While the American Medical Association published its weekly *Health Bulletin*, and sent it broadcast all over the United States for use by papers magazines, etc., our Committee kept it constantly supplied with practical articles on the care of the eyes, avoidance of accidents etc. We also published twenty pamphlets on subjects concerning visual conservation, that have had a large sale, and that have been gratuitously distributed to thousands of readers These pamphlets were written by well-known ophthalmologists and no technical language was used in any of them We have reason to believe that they have accomplished much good

A very important work of our Committee has been the collection of practically all the state laws in the United States concerning the eyes This collection has been divided into seven papers and has appeared quarterly in *Ophthalmology* The subjects have been as follows

State Legislation Concerning Schoolchildren s eyes etc.
State Legislation Concerning Ophthalmia Neonatorum
State Legislation Concerning Trachoma
State Legislation Concerning Wood Alcohol
State Legislation Concerning Shop Conditions etc.
State Legislation Concerning Optometry
State Legislation Concerning the Blind

These articles will be revised and soon will be published in book form by the American Medical Association In this one volume can then be found practically every law in the United States on the subject of the eye. These are not the only accomplishments of our Committee, but it is enough to demonstrate the usefulness of the organization and its possibilities for the future This Committee has become a national institution and is highly regarded wherever its work is known Much remains to be done, however, and it is a pity that the Committee is compelled to close its labors and go out of existence especially as it only requires about $1 500 a year to enable us to go on with the work. I am sure that the American Medical Association regrets most sincerely that owing to "lack of funds' this and other committees must cease from their beneficial labors, but under present conditions they have no alternative. I, therefore, desire to say to the Council on Health and Public Instruction of the American Medical Association, that I regretfully retire from the work as chairman of the Committee on Conservation of Vision and do sincerely thank the Council for the assistance and sympathy it has shown the Committee in the past I also regret that the Council is financially unable to continue its partial support of this Committee in the future, and that this organization, which has done so much for visual conservation, must unfortunately go out of existence

Respectfully submitted

Frank Allport, Chairman

Report of the Council on Medical Education

Dr Arthur Dean Bevan, Illinois, Chairman, presented the report of the Council on Medical Education, which was referred to the Reference Committee on Medical Education

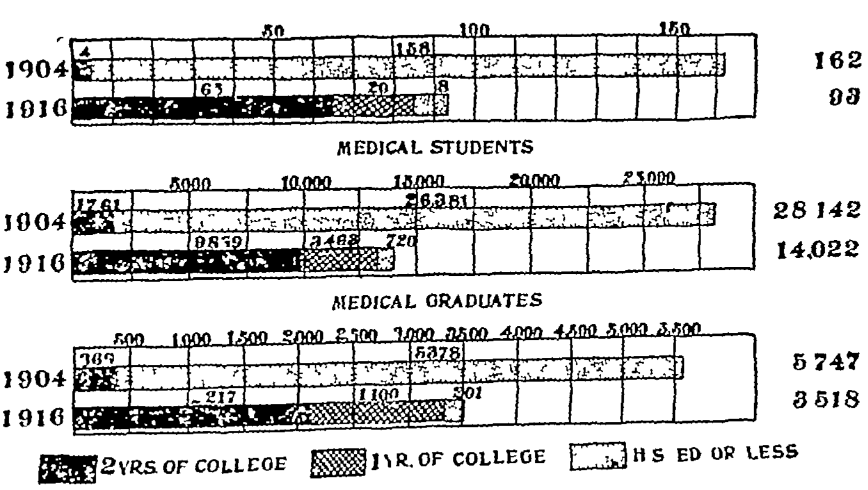
The report follows

To the President and to the Members of the House of Delegates of the American Medical Association

The campaign for improvement in medical education, carried on during the last fourteen years by the American Medical Association, through the Council on Medical Education, is very important, considering the present demand for medical men caused by the entry of the United States into the world war Through the improvements which have been brought about, a large proportion of the medical schools during the last five or six years have been sending out thoroughly trained graduates such as only a few medical schools were turning out fourteen years ago, and it is the graduates of these recent years who constitute largely the material which is most available for the government medical services In 1904 only four medical schools were requiring for admission the standards which now are being enforced, or have been adopted, by sixty-five medical colleges Then only a few medical colleges had six or more expert, full time teachers in their laboratory departments, where now there are over seventy such colleges Then less than a score of medical colleges had close relationship with dispensaries and hospitals, which are now possessed by over sixty medical schools And in 1904 a still smaller number had adopted the methods of teaching by bedside and ward section clinics, which are now generally employed by a majority of the colleges All this has resulted in a decided improvement in the character and training of medical graduates Add to this improved training the experience gained by 75 or 80 per cent as interns in hospitals and we can appreciate the greatly improved medical service which can now be offered to the government as compared with that available fifteen years ago In this development the medical schools have avoided the weakness of the English and German systems of medical education It can be stated without exaggeration, therefore, that a better all-round medical training is now being furnished by the leading medical schools of the United States than can be obtained in the medical schools of either Germany or Great Britain

TABLE 1—QUALITY VERSUS QUANTITY
Changes for the Better in Twelve Years

Entrance Requirements	Colleges		Students		Graduates	
	1904	1916	1904	1916	1904	1916
High school education or less	158	8	26,381	720	5 378	201
One year of college work	0	20	0	3,463	0	1,100
Two years of college work	4	65	1,761	9,839	369	2,217
Totals	162	93	28,142	14 022	5,747	3,518
Percentage with higher requirements	2 5	91 4	6 3	94 9	6 4	94 3



From a different viewpoint, the reorganization in medical education has largely eliminated the low grade medical colleges and correspondingly reduced the numbers of poorly trained graduates which such institutions were annually pouring into the profession Of the forty-one medical schools which have become extinct since 1904, thirty-four, or over 80 per cent of them, had been rated in the lower classifications It is evident that any further reduction there may be in the number of medical colleges, students and graduates will come through the further elimination of inferior teaching institutions While there has been a reduction in the total number of medical colleges, *students and graduates, the* number of high grade medical schools, with their enrolments of students and their annual output of graduates, have been greatly increased The figures are shown in Table 1, and more graphically in the chart which follows that table

The reorganization in medical education, with the reduced number of medical colleges, was bound to result in a reduction also in the numbers of students and graduates Fortunately, *the high grade medical colleges have passed the lowest* ebb and, *as shown in* Table 2,[23] their output of graduates is again on the increase The present demand for medical men for the medical services and the splendid opportunity for advancement in those positions will doubtless result in a further increase in the enrolment of medical students in *high grade institutions* There should be no reduction, since the General Medical Board of the Council of National Defense has urged college students already in medical schools not to enlist, but to continue *in their college and medical courses*, so as to give the country the benefit of their trained, *rather than their* untrained, services

Medical Colleges and the War

The entry of the United States in the European war has led to a consideration of procedures which may be necessary on the part of medical colleges to meet the demand for medical officers Early in April medical colleges were urged to graduate before the usual time—or to grant certificates showing that graduation at the end of the term was quite probable—students who had secured a general average of 85 per cent or more during the four year medical course and who should succeed in gaining admission to the Naval Reserve Force These students were to be assigned to active service at once, for instruction and training, with the view of being later examined for appointment as assistant surgeons in the United States Navy Reports received from thirty-seven state licensing boards were unanimous in the statement that such graduates would not be handicapped when they should later come up for license, since the military medical training would be considered as an equivalent of the training which otherwise would have been received in the medical school Such graduates when applying for a license will be required to show documentary evidence of their having been in the government medical services

The demand for physicians at first appeared to be so urgent as to require medical schools to adopt continuous sessions and omit the usual summer vacation, at least for the senior and junior classes and it appears that several colleges had made arrangements to do so Fortunately more careful consideration by the General Medical Board showed that for the present at least such a measure was not imperative The sudden effort to establish a continuous session might cause great confusion in many medical schools and might seriously interfere with the best teaching In many colleges it would require an extensive reorganization of the medical curriculum and in some parts of the country the hot summer months make undesirable the conducting of teaching during that season Again in almost all colleges there are some students who have to earn money during the summer vacation to meet their college expenses Meanwhile, the summer months will not be lost, since they can be spent, with possibly greater advantage in other more productive occupation Besides the General Medical Board of the Council of National Defense several standardizing agencies including the Council on Medical Education which have considered the matter are of the opinion that the emergency is not at present sufficiently acute to justify a shortening of the medical course or the lowering of educational standards, although certain readjustments in procedure may become necessary If, however, the emergency arises, the medical schools and state boards can be depended on to do whatever the government requires

---

[23] See table, The Journal A M A, April 14, 1917, p 1127

Medical Students' Register

One of the most important and satisfactory pieces of work undertaken by the Council was the establishment, in 1910 of the medical students' register In this work the Council has had a most gratifying cooperation from all but a few of the medical schools Not only have the colleges furnished elaborate reports each year regarding new students admitted but also on blanks furnished by the Council have had each new student fill out and sign a statement regarding his educational history, showing by years where and when his preliminary education was obtained This provides the Council with the means of checking and verifying the entrance qualifications of every student from whom such a report is obtained This regular check on the administration of entrance requirements is preventing a relapse to careless methods on the part of certain medical schools, which would likely occur if by any chance this check were removed Where fifteen years ago very little was known as to just what entrance requirements were being enforced by medical schools, now the Council has the means of knowing positively whether the entrance requirements of medical schools are actually and satisfactorily enforced In no one particular have the medical schools of this country been so greatly improved as in the requirements for admission It is not claimed that perfection has been reached, and faults may still be found but those faults are known and are being corrected Through the information furnished by the students register, the Council is in position to disprove the reports which are occasionally being circulated that the higher standards of preliminary education in the South, or in other sections of the country, are merely on paper and not enforced"

The medical students' register, meanwhile, is an important addition to the Biographical Index of the physicians of the United States which is the basis of the American Medical Directory Meanwhile for the last few years the work of the Biographical Index and the Directory has been conducted under the supervision of the secretary of the Council on Medical Education.

The Hospital Intern Year

The ideal standard of medical education which was suggested by the Council on Medical Education in 1905 consisted of (a) a four-year high school course, (b) a year devoted to college courses in physics, chemistry and biology, (c) a four-year medical course, and (d) a year as an intern in a hospital We are pleased to report that this standard is no longer merely ideal, but has been generally adopted, with the exception of the fifth year as an intern in a hospital At present hospitals are not in sufficiently close relationship with medical schools to allow the latter to have ample supervision of the intern s work. Again, the investigation and standardization of hospitals can at present be best done by the licensing boards, under the authority granted by the state It appears inadvisable, therefore to require this intern year as an essential for the M D degree, but rather to have the student secure it after graduation from the medical school, as an added qualification for the license In fact, an internship as a prerequisite for the license has already been adopted in six states It became effective in Pennsylvania in 1914, in New Jersey in 1916 and will become effective in North Dakota and Rhode Island in 1918, in Illinois in 1921 and in Michigan in 1922

Revised List of Approved Hospitals

A revised list of hospitals deemed in position to furnish acceptable internships for medical graduates has been published during the year This revision was based on reports received from the advisory committees on hospitals in the various states In this revision, a few unworthy hospitals which were contained in the first list, were excluded and a much larger number of worthy institutions were added The list now includes 519 general hospitals, providing 2,709 internships 57 state hospitals, providing 303 internships, and 111 special hospitals providing 328 internships Altogether there are 687 hospitals which provide internships for 3 340 medical graduates There are doubtless other institutions which are worthy of being included on the list, but which are omitted because repeated requests have failed to secure the necessary information in regard to them If all these could be listed even now there would doubtless be an ample number of fairly good hospitals to provide internships for all students graduating each year in the United States

A List of Approved Colleges

Acting on the instructions of the House of Delegates given a year ago, the secretary of the Council has prepared a list of approved colleges of arts and sciences That list is much needed as a guide to deans of medical colleges secretaries of state licensing boards and others, in administering the present standards of admission to the study of medicine It is quite evident that the Council cannot presume to be itself the judge of colleges of arts and sciences, therefore, it has depended on lists of institutions approved by such standardizing agencies as the Association of American Universities the North Central and Southern associations of colleges and secondary schools and on lists approved by state and other prominent universities The list compiled includes 340 colleges and universities In the preparation of this list the Council has received valuable assistance from Dr K. C Babcock formerly specialist in higher education of the United States Bureau of Education, now dean of the College of Liberal Arts and Sciences of the University of Illinois and Dr Theodore Hough, dean of the Department of Medicine of the University of Virginia Last February these gentlemen and Prof George Gailey Chambers, director of admissions of the University of Pennsylvania representing the Association of American Universities, Dr W F R Phillips, professor of anatomy of the Medical College of the State of South Carolina representing the Association of American Medical Colleges, and Dr N P Colwell, the secretary of the Council, were appointed as a special committee to further develop this list of approved colleges

This committee also has in charge the preparation of a suggestive schedule of subjects to be included in the two years of college work which, after Jan 1 1918 is to be the minimum standard for admission to be required of all medical schools listed in Class A. The object of this suggestive schedule is to develop a greater uniformity in the collegiate courses preliminary to medicine.

Economizing Time in Preliminary Education

A careful analysis of the length of time required to obtain a medical education in this country shows that, with their hospital intern year added, medical students complete their medical training, on the average, at the age, approximately, of 28 years From this it is evident that something is seriously wrong with our scheme of American education and that a reorganization must be effected that will reduce the age of graduation from medical and other professional schools by at least two years With the purpose of pointing out these facts to the medical profession and to the educators of the country our conference last February was largely devoted to this problem Articles were presented to Hon P P Claxton, United States Commissioner of Education, President Harry Pratt Judson and Prof C H Judd of the University of Chicago, and others who have devoted particular study to this problem

Several methods by which a saving of the student's time might be brought about were advanced One was through the development of a so-called junior high school, to extend through what are at present the seventh and eighth grades of the elementary school and the first year of the high school This would be followed by a so-called senior high school, covering what are at present the last three years of the high school course It is planned, however, that the curriculum for the elementary and high schools be so rearranged as to cover not only the courses now given in the elementary and high schools but also the subjects contained in the first two years of the regular college course

According to Professor Judd, whose opinions appeared to coincide with those of other speakers, the seventh and eighth grades of the public schools need to be completely remodeled, and he hopes that this can be brought about through the organization of the junior high school and the rearrangement of the curriculum so that it will include many of the subjects heretofore taught in the regular high school course Says Professor Judd

> We are working over the algebra which used to be the exclusive property of the high school and getting it down to the seventh or eighth grade *Geometry has been taught in the latter part of* the high school course We are trying in the seventh and eighth grades to find out how much of geometry belongs elsewhere We are discovering by a study of pupils that foreign languages can be learned in the elementary school

That these changes are reasonable is readily understood from the following statement by Professor Judd regarding American public Schools

> The number of days of the school year in all public schools is now enormously greater than it was *when the present organization* of an eight year elementary school and a four year high school was adopted In the middle of the last century schools were held for a few weeks in *the middle of the winter when the children* were not otherwise engaged in home occupations A school which was in session four months was *unusually* long Today, the better systems hold sessions for nine months As a result, the courses of study can be correspondingly enriched *While the elementary school of 1860* might legitimately devote itself to the three R's, and the high school might legitimately be satisfied with a few elementary courses in science and *letters, the* schools of 1917 with their longer terms cannot be content to teach such meager courses
>
> *Again, the* high school of today has taken over many of the courses of the college of a generation ago This is not merely a matter of the course *of study, it is also a matter of* social opportunity The cities of this country are now providing free of cost to every student the facilities which formerly were provided by endowment at colleges Many cities now provide higher training in institutions explicitly classified as junior colleges *This movement is* far advanced *in* California and is under way *in* Kansas City, Mo, Chicago, Detroit, Grand Rapids, Mich, Joliet, Ill, and other cities

In Professor Judd's *opinion* the organization of the junior high school is the most *important* educational movement that has taken place in America in the last century He says (italics ours)

> It means a complete reorganization of these two schools, the elementary and secondary, and by means of the junior high school, there will be a welding together of the schools which will result in economy and increased efficiency I venture to prophesy that *we shall ultimately come to a six years elementary school followed by a three year junior high school, and this followed in turn by a three year senior high school We shall complete the essentials of elementary education at the end of six years We shall complete the training that is now ordinarily given in a high school and in the first two years of college in the next six years* This is a feasible program, parts of which are now at hand and on exhibition in a *good many* schools in this country Kansas City, Mo, has had a seven year elementary school for a long time We tried the experiment under rigorous conditions of scientific study in our elementary school in the University of Chicago Many centers that could be mentioned are carrying down *the secondary* school work to the seventh and eighth grades and saving one year

Such a reorganization would bring the high schools of this country on a par with those of the various countries of Europe

Apparently, however, those seeking to bring about these reforms in education are *having* a difficult time and it is evident that the medical *profession* should exert all the influence it can in support of the changes suggested To again quote Professor Judd

> These changes are being *tried out, but progress is slow* What we need is the moral support and cooperation of intelligent people As *soon as some school puts* algebra, geometry and Latin down in the seventh grade, there will be a medical certificate issued by the family physician of *some pupil to the effect that the child* is being overworked When the members of an institution, *perfectly* intelligent and conscious of what they are doing, go to a perfectly intelligent constituency and point out that the seventh and eighth grades need more studies there will be *fifteen mothers, if not fifty,* who will say it is not so, that the educators are wrong in wanting to give *children of this* generation an education which differs from that of a generation ago

When asked *what the medical* profession could do in furthering these needed reforms in education, Professor Judd replied

> A number of organizations are devoting themselves to this problem The National Education Association has a committee known as the Committee on Economy of Time, supported by committees of various organizations, one of which is the Association of American Universities These committees need to be brought *to work in harmony* What we *need is* the machinery of standardization Your secretary, Dr Colwell, has *cooperated efficiently with the North Central Association of Colleges* and Secondary Schools in the work of standardizing colleges and that cooperation might help also in the organization of the junior high school and of high schools in general Therefore, my suggestion is that the Council have a committee to cooperate with the existing organizations that are working *for the economy of time in education*

It is the purpose of the Council to *present* this urgent problem to the colleges and universities of the country and attempt to initiate a *propaganda* for such a reorganization *as will shorten by at least two years the time now required to* secure a complete medical education We believe this can be accomplished by the right sort of readjustment of the work of the primary schools, high schools and colleges, without diminishing in any way the thoroughness of preparation

Another method suggested for saving time was to make provision so that medical students who were physically able to do so could *continue their work throughout* part or all of the summer months, such as has been done since 1899 by Rush Medical College, in its quarter system Meanwhile, we learn that the *quarter system has recently* adopted *by* the Medical School of Leland Stanford Junior University

Higher Degrees in Medicine

In the development of graduate medical instruction in this country a question has arisen in regard to degrees for the satisfactory completion of courses in such work While it *was believed that suitable degrees should be provided so* as to recognize graduate courses, at the same time, so far as possible, a multiplicity of degrees was to be avoided After a *discussion of the subject at the* February conference, the following special committee was appointed to make an investigation and to report further on this subject at the next conference

> Dr Horace D Arnold, Boston, chairman, Dr N P Colwell, Chicago, secretary, Dr Louis B Wilson, Rochester, Minn, Dr Isadore Dyer, New Orleans, Dr John M Dodson, Chicago, Dr Alfred Eycleshymer, Chicago, Dr William Pepper, Philadelphia, Dr Victor C. Vaughan, Ann Arbor, Mich, Dr J M T *Finney*, Baltimore, Dr Edward Jackson, Denver, and Dr James Ewing, New York

Medical Curriculum

In 1909, at the fifth annual conference, a special committee of one hundred prominent medical educators, after a year of special study of the subject, brought in a report on a "Model Medical Curriculum" This has had a beneficial effect on medical education in the United States At the eleventh annual conference in 1915 another special committee brought in a report including suggestions for the reorganization of clinical teaching This may be considered as a supplement to the report on a model medical *curriculum,* and it deals with important changes needed in the methods of teaching in the clinical departments of the medical school

The time has now come when a new suggestive *schedule* of the subject content of the medical curriculum and the number of hours to be devoted to each subject should be prepared It is hoped that a greater degree of uniformity of curriculums may result, especially in the subjects of the lower classes, so as to permit of a more free migration of medical students A special committee to prepare a report which shall include suggestions in regard to the changes desired has been appointed, as follows

Dr F S Lee, Dalton professor of physiology, Columbia University College of Physicians and Surgeons, chairman Dr Charles R Bardeen dean and professor of anatomy of the University of Wisconsin Medical School Dr Reid Hunt professor of pharmacology, Harvard University Medical School Dr Theodore C. Janeway, professor of medicine Johns Hopkins University Medical Department and Dr William G MacCallum professor of pathology, Columbia University College of Physicians and Surgeons.

RELATIONS WITH CANADA

A year ago we reported that the rules regulating the practice of medicine in two Canadian provinces—Ontario and Quebec—contained clauses discriminating against medical colleges in the United States Correspondence with the licensing board of Ontario and with prominent physicians of that province, has resulted in eliminating the discriminatory clause With Quebec, however no change was made and the discriminatory clause still remains Meanwhile, reports have been received stating that the better schools of Canada are planning to require another year of work devoted to the premedical branches whereby the requirements of those colleges will be on a par with the requirements for admission to the leading medical schools of the United States The Faculty of Medicine of the Western University of London, Ont, also has adopted the requirement of two years of premedical college work to take effect after Jan 1, 1918

STATE BOARD STATISTICS

In THE JOURNAL of April 14 1917 was published the Council s annual presentation of statistics based on examinations conducted by state medical licensing boards The statistics, which are based on examinations conducted during 1916 show a decided progress in the licensing of physicians in this country in the last thirteen years which is briefly set forth in Table 3[24] The most marked progress was in connection with the adoption of higher standards of preliminary education, thirty-six states now requiring one or more years of collegiate work, and twenty-one of these requiring the two-year standard The next largest increase is in the refusal of state boards to recognize graduates of low-grade medical colleges There are now thirty-nine states in which the diplomas granted by certain medical colleges are not recognized as an acceptable qualification for admission to the licensing examination The facts are set forth in Table 4[25] It is worthy of note that there are eighteen colleges the diplomas from which are not fully recognized in twenty or more states The facts set forth in this table are based on official reports received from the state licensing board On the other hand, it is seen that there are ten states in which the boards do not have or are not using, the authority to refuse recognition of a medical college, no matter how inferior or undeserving it may be It is evident (see Table 5) that these states are bound to be the dumping ground for the output of low-grade colleges which are rejected by other states

CHARACTER OF APPLICANTS LICENSED

Table 5 which was not published with the other statistics, is of special interest since it shows for each state the character of the candidates licensed during 1916 Note that, of the 5 394 candidates licensed, the classification of the colleges from which they graduated is known for 3,877 There were 164 licensed (miscellaneous) who graduated from colleges which became extinct, or which merged with other colleges before 1907, when the first classification of medical colleges was prepared, 82 were graduates of foreign medical colleges and 1,271 were licensed without examination by the endorsement of licenses (reciprocity) in other states Of the 3,877 coming from colleges of known classification, 3,077 or 79 3 per cent, graduated from Class A medical colleges Note that in Michigan, New Hampshire, Rhode Island and Virginia all candidates from colleges of known classification came from Class A medical schools In all but a few states it is noteworthy that the greater number of those licensed are from Class A institutions The contrary is true, however, in several states It will be seen that the largest number of graduates from Class C colleges were licensed in Missouri, Arkansas, California and Illinois In Illinois 219 graduates of Class B colleges were licensed and more graduates of Class B and Class C colleges were licensed than graduates of Class A medical schools The same is true in Arkansas, California and Missouri It is evident, therefore, that in the states just named there is need of more efficient methods in the licensing of physicians Illinois still has the darkest record in connection with the licensing of physicians We are pleased to report, however, that great improvements are in sight through the enacting in Illinois of the new consolidation law, which it is hoped, will place the licensing of physicians on a strictly educational basis

TABLE 5—CHARACTER OF PHYSICIANS LICENSED IN 1916

States	Graduates of					Reciprocity Licenses	Totals Licensed
	Medical Colleges in Class			Misc Colleges	Foreign Colleges		
	A	B	C				
Alabama	46	4	0	5	0	0	55
Alaska	9	0	0	1	1	0	11
Arizona	18	4	1	4	6	0	33
Arkansas	17	22	21	6	0	28	94
California	81	40	1	3	7	176	302
Colorado	22	1	2	0	0	61	86
Connecticut	32	2	0	4	3	6	47
Delaware	11	2	0	0	0	6	19
Dist of Columbia	27	1	1	1	3	11	44
Florida	19	8	0	9	3	0	68
Georgia	122	9	1	1	0	19	152
Idaho	17	2	1	8	1	4	33
Illinois	272	219	11	2	3	39	546
Indiana	42	3	0	1	3	27	76
Iowa	67	7	1	5	2	21	103
Kansas	24	1	7	0	0	63	95
Kentucky	50	13	0	3	0	6	72
Louisiana	64	3	0	1	0	9	77
Maine	20	1	0	2	2	6	31
Maryland	87	1	0	5	3	24	120
Massachusetts	131	5	8	11	8	0	163
Michigan	131	0	0	0	4	89	224
Minnesota	52	1	0	1	2	45	101
Mississippi	43	2	0	3	0	10	58
Missouri	72	18	57	11	0	51	212
Montana	20	7	1	10	0	0	38
Nebraska	45	4	3	0	0	18	70
Nevada	6	1	1	0	2	19	29
New Hampshire	10	0	0	0	0	15	25
New Jersey	62	8	0	1	1	91	163
New Mexico	1	1	0	3	0	9	14
New York	457	46	8	5	7	21	544
North Carolina	73	22	0	1	0	17	113
North Dakota	10	2	0	3	0	20	35
Ohio	154	27	0	0	1	69	251
Oklahoma	28	19	0	5	0	55	107
Oregon	26	3	3	4	2	19	57
Pennsylvania	202	20	0	10	1	0	233
Rhode Island	26	0	0	1	0	0	27
South Carolina	47	2	1	3	0	0	53
South Dakota	11	5	0	2	0	0	18
Tennessee	75	38	7	7	1	14	142
Texas	72	13	1	1	3	75	165
Utah	11	3	0	1	0	8	23
Vermont	15	1	0	0	1	6	23
Virginia	94	0	0	4	1	32	131
Washington	33	8	0	3	0	0	48
West Virginia	40	12	0	6	0	32	90
Wisconsin	64	6	0	1	1	55	127
Wyoming	9	4	0	3	1	15	32
Totals	3 077	646	154	161	82	1 271	5,394
Percentage of all licensed	57.0	12.0	2.9	3.0	1.5	23.6	100.0

REGULAR WORK CONDUCTED BY THE COUNCIL

The various regular lines of work now being conducted by the Council on Medical Education are as follows

(a) Conducting, during the first week of February each year, a conference on medical education and medical licensure, where problems of interest to medical schools and to state licensing boards are brought up for discussion The report of this conference is published in the American Medical Association Bulletin about March 1 each year This conference has grown from a small beginning until in 1916, 329 delegates were present

(b) An annual presentation of statistics based on examinations conducted by state licensing boards during the preceding year Reports are obtained throughout the year shortly after each examination is held The statistics are published about the second week of April each year

---

[24] See Table M THE JOURNAL A M A, April 14 1917 p 1120

[25] See Table D, THE JOURNAL A M. A April 14, 1917 p 1112

(c) The revision and publication of a book of "Laws and Board Rulings Regulating the Practice of Medicine in the United States" This book also contains the latest available information in regard to the requirements for registration in various foreign countries, a complete list of foreign medical colleges and other information in regard to medical colleges, medical education and state requirements of preliminary education

(d) Cooperation with the Association of American Medical Colleges and with the Federation of State Medical Boards so as to further the establishing and maintenance of uniform and reasonable standards of medical education and medical licensure

(e) Cooperation with associations of colleges and secondary schools, so as to keep medical education in close correlation with other departments of education

(f) Collecting and publishing information in regard to medical colleges, students and graduates for the Council's annual presentation of medical college statistics These are published about the third week of August each year

(g) Obtaining information from medical colleges regarding new students enrolled at the beginning of each session This information is the basis of the medical students' register

(h) Reports obtained from state boards, from medical colleges and for the students' register furnish the information for maintaining and keeping up to date the biographical index of all physicians of the United States This information is also utilized in correcting and bringing up to date the American Medical Directory, a new edition of which is issued every alternate year

(i) Keeping up to date the classification of medical colleges In justice to certain colleges and as improvements appear to warrant, reinspections are made, so that the college's rating can be changed if the conditions found justify such action

(j) Obtaining from all available sources information in regard to the various drugless cult institutions The most notorious of these institutions are written up and from time to time the facts in regard to them are published

(k) Information in regard to hospitals is now being collected, so as to answer the requests for such information which come to the office of the American Medical Association This information is also serviceable in connection with the maintaining of the list of hospitals furnishing acceptable internships

(l) All the lines of work referred to, provide data for the *clearing house of information* in regard to medical colleges, medical education, medical licensure, drugless cult colleges, hospitals, etc., which is now being maintained by the Council Information is now being furnished in response to a rapidly increasing volume of correspondence from those in need of such information Requests are now being received from a rapidly increasing number of prospective medical students asking for information regarding medical colleges Full information, including the Council's classification, has been included in a small pamphlet, so that it can be furnished readily and at small expense

Future Work

The following special lines of endeavor are such as could be carried on by the Council with, undoubtedly, excellent results They may need to be postponed, however, on account of the entry of the United States in the world war, but should be taken up as soon as conditions are favorable

(a) There should be another general revision of the Council's classification of medical colleges The standard on which the present classification is based should be strengthened and the medical schools reclassified accordingly This should follow a reinspection of all medical schools The reinspection would be of marked benefit not only through a reclassification of colleges, but also through the assistance to the colleges which the Council would be able to render, through oral and written suggestions

(b) An effective work which could be carried on by the Council would be to have a representative attend and make a special study of the examinations conducted by various state licensing boards The Council could in this way obtain better information regarding the methods of examination and information regarding effective methods employed in one state could be furnished to other states Through this visitation the needs of each individual state could be studied and efforts could be intelligently directed toward improvement.

(c) A careful and thorough investigation should be made of all drugless cult institutions, so that first-hand information regarding them could be published This information would be of service in dealing with the medical cult problem

(d) There should be a further investigation of graduate schools, and information should also be collected regarding the various measures employed to take graduate courses to physicians, so that reliable information could be disseminated among those in need of such courses

(e) The investigation of hospitals is a matter which could be carried on with advantage, to whatever extent funds for such work may be available This is a work which may largely devolve on state licensing boards, but the American Medical Association should keep in close touch with and participate in that work, so as to develop and maintain uniform standards

Respectfully submitted,

Arthur Dean Bevan, Chairman
James W Holland
Horace D Arnold
Robert C Coffey
William D Haggard
N P Colwell, Secretary

Dr Arthur T McCormack, Kentucky, moved that the House take a rising vote as an indication of appreciation of the magnificent work of the Council on Medical Education and its members individually

Seconded and unanimously carried

Dr Bevan stated that he did not take a vote of appreciation as a personal compliment, but as a compliment to the members of the council who had done the work.

Report of the Council on Scientific Assembly

In the absence of Dr E S Judd, Minnesota, chairman, the Secretary suggested that the Report of the Council on Scientific Assembly be received as printed in the Handbook and referred to the Reference Committee on Reports of Officers

There being no objection to this suggestion, it was so ordered

The report follows

To the Members of the House of Delegates of the American Medical Association

Your Council on Scientific Assembly appreciates the responsibility placed on it and realizes that changes in the conduct of the Scientific Assembly should be made only after careful deliberation both on the part of the Council itself and of the House of Delegates

Number of Section Meetings

The Council repeats and desires to emphasize what was brought out in the excellent report of the special committee on Sections and Section Work two years ago that is, *that at our annual sessions too many section meetings are held at the same time* There is no question as to this The annual sessions of the British Medical Association are often compared with our annual sessions to the advantage or disadvantage of the one or the other, according to the point of view The British Medical Association is charged with devoting too much time to social functions and renewing acquaintances and too little time to scientific work. We are accused—and the Council on Scientific Assembly believes this is a just criticism—of devoting too much time to scientific work and too little to social enjoyment and getting acquainted with each other

Your Council is of the opinion that a more effective distribution of time will be presented if the Sections are limited to one meeting a day Those men who are particularly interested in what they regard as their particular section feel it their duty to attend all the morning and afternoon meetings any one of which is liable to be extended

It is a strain to attend every meeting of a section

It is possible to have too much of a good thing

There is such a bewildering abundance in the program of the Scientific Assembly that the average man is at a loss to know what section to attend and not infrequently finally ends by not attending any The man who is faithful to one particular section has no opportunity of attending the meetings of other sections It would be a good thing for the ophthalmologist if he were free in the morning or the afternoon, to attend the laryngological section and it would do him no harm if he attended the Section on Practice of Medicine or the Section on Nervous and Mental Diseases or some other, nor would it injure the laryngologist to visit the ophthalmological section or any of the others This applies also to the internist the surgeon, the obstetrician, the neurologist the dermatologist, in fact to all physicians Our Scientific Assembly ought to be so conducted that a man would not think he was neglecting the section in which he has an especial interest when he takes time to keep in touch with what is being done in other sections or to meet other physicians outside the sections

The present division of the Scientific Assembly has developed gradually as a result of groups of men engaged in a special line of practice requesting the formation of separate sections for their specialties At the present time, certain individuals and groups cannot get away from the opinion that the sections are independent organizations to which they belong by virtue of membership" and to which they must give allegiance They seem not to realize that there is no provision for affiliation with a section other than that a Fellow registering as in attendance at an annual meeting is privileged to designate the section in which he wishes to be enrolled," and this is for the purpose of voting for section officers It should be emphasized that the Scientific Assembly of the American Medical Association is an entity and that the sections are merely parts of a whole.

The Council would not be misunderstood Allegiance to a particular section is desirable It has been and is an important factor in developing scientific work

The Council recommends that as a trial measure, the ten Sections to which are assigned three units or less shall hold but one meeting a day and that these meetings shall be assigned by the Council on Scientific Assembly so that sections covering more or less closely related subjects shall be grouped, one meeting in the morning and the other in the afternoon For instance, the Section on Dermatology could be paired with the Section on Genito Urinary Diseases, that is the Section on Dermatology meeting in the morning and that on Genito-Urinary Diseases in the afternoon Then the Section on Diseases of Children might alternate with that on Orthopedic Surgery, the Section on Practice of Medicine with that on Pharmacology and Therapeutics, the Section on Surgery, General and Abdominal, with that on Obstetrics, Gynecology and Abdominal Surgery, the Section on Ophthalmology, with that on Laryngology, Otology and Rhinology This of course assumes that later on the sections having more than three units will ultimately decide to hold one meeting a day

This grouping could be so arranged that the sections which meet in the morning one year would meet in the afternoon the next, so that if there be any advantage in the morning over the afternoon meeting, or vice versa, this would be equalized The Council is of the opinion that if this plan of holding but one meeting a day is carried out by the ten sections, the remaining five will appreciate the advantage of the plan and adopt it.

NEGLECTED TOPICS

A number of more or less important subjects are not discussed in the Scientific Assembly because they do not seem to fit in any of the existing sections This in part at least, may account for appeals which have been made to the House of Delegates to establish a new section for this, that or the other subject Such petitions often are recognized as just appeals but there are already too many sections Moreover as a rule there is no assurance of an actual demand for the section or that the progress in the specialty asking for recognition is sufficient to warrant a separate section By way of illustration, the Section on Hospitals is cited It was constituted because some men felt that the subject was of sufficient importance to warrant a section Time showed that this was not the case There is no doubt that at intervals a meeting could be devoted with profit to discussing questions concerning hospitals and their management The Council is convinced that many other topics now neglected should be provided for from time to time on the program of the Scientific Assembly For instance, the technic of roentgenography, anesthetics including mechanical devices for administration, or such timely topics as the duties of the medical corps of the federal government the important subject of expert testimony and other relations of physicians to courts at law, life insurance examinations, and many others which might be cited should be presented occasionally None of them require a separate section, all of them and similar topics, are worthy of occasional discussion If the House approves provision should be made whereby your Council could arrange for the discussion of such subjects by allotting a unit or units to certain of them from time to time, as well as appoint officers to arrange and conduct such meetings

BY-LAWS AND STANDING RULES

The functions of the Council are defined in the by-laws but this body is vested with no authority If the House of Delegates desires it to be more than simply an advisory body, the Council is ready to serve the Association to the best of its ability, and submits for the consideration of the House of Delegates the following suggestions for the modification of the by laws of the Association

(*a*) That to Chapter VII Section 7, page 20, there be added the following paragraph

> 'To this Council shall be referred unless otherwise unanimously ordered resolutions measures and propositions relating to the sections and section work presented to the House of Delegates before final action is taken by the House'

(*b*) That Chapter XI Section 4, paragraph (c), page 31, have added after the word "chairman" appearing in the fourth line of the printed paragraph the words 'and in accordance with rules and regulations enacted by the House of Delegates," so that this paragraph shall read

> Secretary —The secretary shall keep a record of the proceedings of the section in a book provided for such purpose shall, with the cooperation of the chairman *and in accordance with rules and regulations enacted by the House of Delegates* arrange the program and shall at least thirty days before the Scientific Assembly forward it to the Secretary of the Association for insertion in the official program and shall perform such other duties pertaining to his office as may be provided by the by laws of the Association or of the section'

(*c*) That Chapter XI, Section 12, page 33 be amended so as to read

> Number of Papers on Program —The number of papers including addresses on the program of any section shall not exceed six in each unit assigned to the section by the rules and regulations enacted by the House of Delegates provided however that no section may list more than thirty papers on its program'

(*d*) That Chapter XI, Section 3, page 30, be amended by substituting for the first sentence, which reads "The election of officers of the several sections shall be the first order of business of the next preceding the final meeting of the section at each Scientific Assembly except when the section holds but one meeting," the following

> 'Election of Officers —The election of officers of the several sections shall be the first order of business of the next preceding the final meeting of the section at each Scientific Assembly provided, however that when a section shall hold not more than two meetings at any annual session these officers shall be elected at the final meeting

The Council further suggests the following standing rules for the government of the Scientific Assembly

1 The term "unit" shall signify a single meeting of a section at an annual session

2 Not more than six numbers shall be listed on the scientific program of any one unit, and further, no section shall list more than thirty papers (the number to which a section is limited by the by laws of the Association) at any one annual session, distributed among all the units assigned to it

3 The sections of the Scientific Assembly shall be limited at each annual session to the maximum number of units listed in the appended table

Practice of Medicine	6 units
Surgery, General and Abdominal	6 units
Obstetrics, Gynecology and Abdominal Surgery	6 units
Ophthalmology	6 units
Laryngology, Otology and Rhinology	6 units
Diseases of Children	3 units
Pharmacology and Therapeutics	3 units
Pathology and Physiology	3 units
Stomatology	2 units
Nervous and Mental Diseases	3 units
Dermatology	3 units
Preventive Medicine and Public Health	3 units
Genito Urinary Diseases	3 units
Orthopedic Surgery	3 units
Gastro Enterology and Proctology	2 units

4 Those sections to which three or a less number of units are assigned shall hold but one meeting on each of the days of the annual session during which section meetings are held

5 The Council on Scientific Assembly shall apportion the morning and afternoon units at each annual session to the several sections

Respectfully submitted

E S Judd, Chairman
Roger S Morris
George H Simmons
J Shelton Horsley
Alexander R Craig

Report of the Committee on Red Cross Medical Work

Dr George M Kober District of Columbia, chairman presented the Report of the Committee on Red Cross Medical Work, which was referred to the Reference Committee on Reports of Officers

The report follows

To the Members of the House of Delegates of the American Medical Association

A Committee on Red Cross Medical Work was created at the request of the American Red Cross at the 1912 Session in accordance with Section 8 of Chapter VII which reads as follows

"Sec 8—Committe on Red Cross Medical Work. The Committee on Red Cross Medical Work shall consist of three Fellows, one of whom shall be appointed by the President upon nomination of the Surgeon General of the Army, one upon the nomination of the Surgeon General of the Navy and the third member of the Committee, who shall be its chairman, shall be appointed by the President and nominated to the Red Cross as the representative of the Association on its Relief Board This Committee is authorized to cooperate with the National Red Cross and shall have advisory supervision over state committees having charge of the same subject and shall be empowered to act for the Association in matters involving medical personnel in times of disaster provided that it shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees"

Organization and Activities of the American National Red Cross

It is not generally known that the American Red Cross was chartered by Congress not only as a relief organization in case of disaster in civil life, but also to furnish volunteer aid to the sick and wounded of armies in time of war, and for said purpose to act in accord with the military and naval authorities as a medium of communication between the people of the United States of America and their army and navy

The President of the United States is ex-officio President of the American Red Cross and he appoints five others members of the central committee, who are at present the Secretary of State, Surgeon General of the Army, Surgeon General of the Navy, Comptroller of the Currency and the Solicitor General of the United States The plans of the American Red Cross for war time relief service have long since been made in conjunction with the War and Navy Departments, and will be executed only in cooperation with the government

The chief object of committees on Red Cross Medical work in every state and county of the Union, is to provide a body of representative physicians of approved qualifications, on whom the Red Cross can call to direct or participate in medical work carried on by that organization in any emergency which may arise We have simply to recall the many disasters such as floods, earthquakes, forest fires and cyclones which have required the intervention of the Red Cross in order to appreciate the value of a permanent committee in every county to advise with the representatives of that society in handling medical and sanitary problems incident to such an occurrence.

Apart from its activity in emergency relief work the Red Cross in times of peace is also engaged in an educational campaign for the mitigation of human suffering and the saving of lives So far it has extended this movement with excellent results to the teaching of prevention of accidents and first aid to the injured, in connection with mines, railways, lumber camps, industrial plants and bathing beaches, etc

Activities of the Committee on Red Cross Medical Service

It has been the aim of your Committee to stimulate the creation of a Committee on Red Cross medical work in every county medical society This has involved the issue of repeated circulars The correspondence up to 1915 being carried on direct with the county medical societies The Reference Committee on the report of the Officers at the session of the House of Delegates in 1915 recommended that the activities of the committee be directed through the state associations rather than with county societies directly

On July 24, 1916, Major Robert U Patterson, M C U S A, the Secretary of the National Committee on Red Cross Medical Service, at our request recircularized through the Secretary of the State Medical Society all County Medical Societies as had not already organized a Committee on Red Cross Medical Work.

A copy of the Circular (see appendix A) was addressed to the Secretary of the respective county medical societies, inclosed in addressed and stamped envelopes and forwarded to the Secretary of the State Medical Society, so all that remained to be done was for the Secretary and President to transmit them with such indorsement as they deemed proper This action has had the effect that since May 1, 1916, 174 additional county medical associations have been enrolled so that now 756 county societies in 49 different states are in close affiliation with the American Red Cross ready to cooperate with that body in all emergencies which may confront the nation in peace or war

NUMBER OF COUNTY MEDICAL SOCIETIES BY STATES WHO HAVE APPOINTED COMMITTEES ON RED CROSS MEDICAL WORK

Alabama	10	Nebraska	17
Arizona	8	Nevada	1
Arkansas	20	New Hampshire	6
California	16	New Jersey	7
Colorado	11	New Mexico	8
Connecticut	6	New York	30
Delaware	1	North Carolina	11
District of Columbia	1	North Dakota	5
Florida	11	Ohio	41
Georgia	20	Oklahoma	26
Idaho	2	Oregon	5
Illinois	43	Pennsylvania	44
Indiana	48	Rhode Island	5
Iowa	37	South Carolina	11
Kansas	23	South Dakota	5
Kentucky	36	Tennessee	15
Louisiana	7	Texas	47
Maine	9	Utah	2
Maryland	2	Vermont	4
Massachusetts	15	Virginia	9
Michigan	18	Washington	9
Minnesota	11	West Virginia	9
Mississippi	17	Wisconsin	20
Missouri	38	Wyoming	1
Montana	8	Total	756

Duties So Far Performed By County Committees

So far some of the committees have been called on by Major Patterson, the Chief of Bureau of Medical Service of the American Red Cross, to report on the qualifications of physicians and surgeons offering to serve the Red Cross hospital units in the European War zone The endorsements have been invaluable in the selection of men, as it is highly important that reputable men only be chosen, in order to protect the American Red Cross and the reputation of the Medical profession whom they represent abroad Some of the committees have been called on to act as instructors and judges in contests organized by the First Aid Department of the Red Cross for miners, lumbermen, railway service men, industrial workers, etc.

It should be understood that in case of war the "Department of Military Relief" of the American Red Cross will place all of its personnel and agencies at the disposal of the Army and Navy of this country

MEDICO MILITARY PREPAREDNESS

In this connection it should be stated that owing to the strained relations of this country with foreign nations the Government in the spring of 1916 appointed an Advisory Committee of prominent citizens as consultants on various industrial and economic problems About the same time the subject of medical preparedness was more or less discussed at the Clinical Congress of Surgeons of America In the early part of April the President of the American Medical Association, Dr Albert Vander Veer, was asked to cooperate with the presidents of the Congress of American Physicians and Surgeons, the American Surgical Association, the Clinical Congress of Surgeons of North America and of the American College of Surgeons jointly to appoint a committee which would make a comprehensive survey of the medical resources of the country including the names of physicians available for field or home duty in time of war, with special qualifications of each and the equipment of the institutions with which these men are connected together with other data required for a mobilization of the medical resources of the country This Committee met in Chicago for organization on April 14, 1916, and elected as Chairman, Dr Wm J Mayo, as Secretary, Dr Frank F Simpson, and the following Executive Committee Drs George E. Brewer, George W Crile J M T Finney, Robert G Le Conte, Fred B Lund, William J Mayo, Franklin H Martin, Frank F Simpson William S Thayer and Albert Vander Veer On April 28 this Committee met in Washington and made an offer of their services and those of 70 000 medical men, which they represented, to the President to assist the medical welfare of the Army and Navy

NATIONAL COMMITTEE ON RED CROSS MEDICAL SERVICE

Col J R. Kean Medical Corps of the U S Army[26] the Director General of Military Relief of the American Red Cross pointed out to the Committee at its Washington meeting that the work proposed by it seemed to cover ground which was given to the American Red Cross by its charter and by the proclamation of the President of the United States of August 22, 1911 and proposed that this committee should work either through the Red Cross or in conjunction with it. This suggestion, after due deliberation on the part of the Committee of the associated medical societies was accepted to the extent, that an agreement was entered into that they should cooperate with the American Red Cross through its National Committee on Red Cross Medical Service, which committee should be an interlocking one with the committee of the associated medical societies, by having as members of the national committee all the members of the committee of the associated societies which was known as the Advisory Committee of Civilian Physicians and Surgeons on Medical Preparedness"

The Red Cross on June 1 1916 appointed a National Committee on Red Cross Medical Service composed of thirty-six representatives of the Associated Medical Societies The following were the members appointed the numbers after their names indicating the number of years which each member is to serve

Bevan Arthur D (1)	122 S Michigan Ave Chicago
Billings Frank (2)	122 S Michigan Ave Chicago
Finnie John F (3)	1334 Rialto Bldg Kansas City, Mo
Bloodgood Joseph C (1)	904 Charles St Baltimore
Bradford Edward H (2)	D Har Med School Boston
Brewer, George E (3)	16 E 64th St New York
Crile, George W (1)	Osborne Bldg Cleveland
Cushing Harvey (2)	Peter Bent Brigham Hospital Boston
De Schweinitz George E (3)	1705 Walnut St Philadelphia
Finney J M T (1)	1300 Eutaw Place Baltimore
Gibson Charles L. (2)	78 E 54th St New York
Kober George M (3)	920 H St N W Washington D C
Lambert Samuel W (1)	Dean Columbia Univ Med School, New York
Le Comte Robert G (2)	1530 Locust St Philadelphia
Lund Fred Bates (3)	527 Beacon St Boston
Martin Edward (1)	1506 Locust St. Philadelphia
Martin Franklin H (2)	30 N Michigan Ave Chicago
Matas, Rudolph (3)	3523 Prytania St. New Orleans
Mayo Charles H (1)	Rochester Minn
Mayo W J (2)	Rochester Minn
Murphy, J B *	
Murphy Fred T (1)	5738 Cotes Ave St Louis
McMurtry, Lewis S (2)	The Atherton Louisville, Ky
Noble, George H (3)	980 Peachtree St Atlanta Ga
Ochsner Albert J (1)	2101 Sedgwick St, Chicago
Porter Charles Allen (2)	254 Beacon St, Boston
Reed C A L (2)	Union Central Bldg Cincinnati
Rixford Emmet (1)	1795 California St, San Francisco
Royster, Hubert A (2)	423 Fayetteville St, Raleigh N C
Sewall Henry (3)	Majestic Bldg Denver
Simpson F F (1)	7048 Jenkins Arcade Bldg, Pittsburgh
Strong Richard P (2)	120 Broadway, New York
Thayer William S (3)	406 Cathedral St Baltimore
Vander Veer Albert (1)	28 Eagle St Albany, N Y
Vaughan Victor C (2)	221 S State St Ann Arbor Mich
Williams J Whitridge (3)	Dean Johns Hopkins Med School Baltimore

* The vacancy occasioned by the death of Dr Murphy in August, 1916 was filled by the appointment of Dr Walter Jarvis Barlow of Los Angeles

The ex officio members are The Surgeons General of the Army, Navy and Public Health Service, the President of the American Medical Association, President of the Congress of American Physicians and Surgeons President of the American College of Surgeons, the Director General of Military Relief the Director General of Civilian Relief, the Director of the Bureau of Medical Service the Director of the Bureau of Naval Service, and the Chairman of the National Committee on Red Cross Nursing Service

The regular meetings of this committee are scheduled to be held at the time of the meeting of the American Medical Association and also at the time of the Annual Meeting of the American Red Cross

In order to secure a thorough cooperation between the National Committee on Red Cross Medical Service and the States, the American Red Cross appointed a Committee of nine in every State The members of this Committee were chosen as follows three by the President of the American Medical Association three by the President of the Congress of Physicians and Surgeons and three by the President of the College of Surgeons

RECOMMENDATIONS

While this action may not be in accord with the recommendations of the House of Delegates which directed in 1915 that activities of the Committee on Red Cross Medical Work of the American Medical Association should be made through the State Associations instead of the county societies, directly meaning thereby Medical Associations, the facts are that this matter was beyond the control of your committee. The President of the American Medical Association committed the Association to this action, evidently for the purpose of harmonizing conflicting, but highly important patriotic activities in the line of national medical preparedness The President of the American Medical Association moreover has also endeavored to safeguard the affiliation which should exist between the Association and the State Societies by selecting invariably the President and Secretary of the State Medical Association among the three members alloted to him In the judgment of your committee his action should be approved by the House of Delegates, as it was doubtless the best solution of a very difficult and delicate problem

Your Committee further recommends that hereafter all communications with County Medical Associations may be transmitted through the State Committee on Red Cross Medical Service Heretofore we have complied strictly with the directions of the House of Delegates

In this connection it should be remembered that just as the "Advisory Committee of Civilian Physicians and Surgeons on Medical Preparedness' is an interlocking one with the National Committee on Red Cross Medical Service, so it is intended that the State Committees should perform the dual functions on medical preparedness, and also on Red Cross Medical Service

The Duties of the National, State and County Committees on Red Cross Medical Service are clearly defined in Appendix B

An outline of the activities of the National Advisory Committee and of State and county committees on Medical Preparedness will be found in Appendix C

A careful perusal of these regulations is earnestly recommended

There are a few points not referred to in these documents which your Committee deem important to emphasize in the interest of efficiency and preparedness

1 It is extremely desirable that all county medical societies that have not yet organized Committees on Red Cross Medical Work will do so at the earliest possible moment, so

---

[26] See Annual Report of the American Red Cross Dec. 13 1916 p 46

that they may participate in the patriotic duties expected to be performed by the Medical Profession in all parts of our beloved country

2 The experience of European countries has shown the unwisdom of medical students enlisting in line or sanitary organizations, thereby interrupting their medical education and depleting the ranks of future medical officers A similar tendency has been noted in this country, and in order to guard against a possible shortage the Medical Board of the Council of National Defense on April 23 declared it to be the patriotic duty of even premedical students to remain under instruction until the country can avail itself of their trained services In justice to this class of men and also the graduates of the class of 1917, who in the interest of real efficiency have been urged to complete their hospital year, their position should be clearly understood in every community and defended by the medical profession upon the ground of genuine preparedness

3 Physicians can render a great service by advising college and high school graduates not destined for a medical career to enlist in the ambulance corps or other sanitary organizations of the American National Red Cross, or in the Hospital Corps of the United States Army and Navy It is worthy of note that there are commissioned medical officers now in these services, who began their career as enlisted men of the hospital corps

4 There is a distinct need for Medical Officers in the regular Army and Navy with about 1,300 vacancies to be filled It is generally conceded that the most available class of men for Medical Officers are graduates of the classes of 1916, 1915 and 1914, since the majority have had one year and quite a large number two years of hospital experience and that they include a large percentage of unmarried men On the other hand it should be remembered that there is a large number of medical men now on the rolls of the American Red Cross and the Officers Reserve Corps, and many more are wanted, whose practice is liable to be dissipated, while performing a patriotic duty In order that the families of such men and their practice may not suffer, your committee strongly recommends the methods suggested to prevent such an evil (For details see *Journal American Medical Association*, April 14, 1917, p 1131, and April 28, p 1270)

5 Your committee also recommends that a copy of this report with the action of the House of Delegates be transmitted to the State and County Medical Associations in the United States and Insular Possessions

ADDENDUM

Since the foregoing report was submitted for printing, the mobilization of the medical forces of the American Red Cross under the leadership of director general, Col Jefferson R. Keen, Medical Corps, U S Army, has made rapid progress

Of the 38 base hospitals with a capacity of 500 beds each, and a personnel of 24 medical officers, 65 nurses and 153 sanitary corps enlisted men for each hospital, 6 are already doing duty on foreign soil with the allied troops

In addition to the 38 base hospitals, 20 hospital units each composed of 1 director, 1 adjutant, 2 chiefs of service, 4 staff surgeons, 4 staff physicians, 1 head nurse, 20 nurses, and 3 clerks, have been organized These hospital units are intended to supplement and assist already established military hospitals

Of the 42 ambulance companies organized, each composed of 5 medical officers and 119 sanitary corps men, 12 are now awaiting orders for Europe and the remainder are undergoing instruction In addition, 14 Red Cross sanitary training detachments, with a personnel of 64 each, have been organized and are now preparing for active service

It must be a source of gratification to the American medical profession to know that the first military aid given to the Allies has been in the line of medical relief and the conservation of life

Respectfully submitted

George M Kober, M D,
Chairman

Henry T Birmingham,
Colonel Medical Corps, U S Army

T W Richards,
Surgeon, U S Army

Appendix A[27]

To the Secretary, Medical Society

Dear Sir —The undersigned have been constituted a committee by the President of the American Medical Association to cooperate with the American Red Cross, in the matter of medical work

The committee feels that a great deal of substantial good will come to all communities by providing a body of representative physicians of approved qualifications to direct or participate in medical work carried on by the Red Cross in different localities in times of emergencies and to advise with the representatives of that society on questions of medical policy and procedure Besides its activity in emergency relief work, the Red Cross is engaged in an educational campaign for the mitigation of human suffering and the saving of lives So far it has extended this movement only to the teaching of prevention of accidents and first aid to the injured, but it is hoped in future that it shall include popular instruction in the prevention of disease These medical committees are not in any way bound to this educational work of the Red Cross, but members of the committees who may be interested are invited to correspond with the First Aid Department of the Red Cross

In the opinion of this committee, the plan may be properly considered under the following headings

1 Object Primarily this service is designed to meet local emergencies when conditions of disaster are such as to call for the intervention of the Red Cross When exigencies come about in any community the Red Cross would be glad to feel that it might call on carefully selected physicians in that community to lend their aid in the medical work incident to the situation

2 Organization It is desired to have in every county a central committee of five physicians, two of whom shall be the President and Secretary of the County Medical Society, *ex officio* The President of the County Medical Society shall select the other three members, preferably from the list of councilors or of the executive committee This committee shall be designated the "Committee on Red Cross Medical Work" The names and residences of the members, immediately after organization, should be reported to the chairman of the American Medical Association Committee In case of disaster, requiring relief action by the Red Cross, these county committees will be called on to nominate qualified medical men in their respective counties for Red Cross service The committees will also serve in an advisory medical capacity to the Red Cross in time of disaster and in other lines of Red Cross activity as indicated in a preceding paragraph

3 Qualifications The certification of physicians by County Committees will be accepted as ample evidence of the physical, moral and professional qualifications of the gentlemen recommended for appointment It may be pertinent to state that service in time of disaster may entail severe physical effort and physical fitness of appointees to perform hard work is, therefore, important

4 Compensation In some instances the Red Cross may require the services of physicians at a distance from their places of residence and for varying periods. Under these conditions the Red Cross will be prepared to pay traveling expenses and a moderate honorarium to be agreed on between the physicians and the National Director of the Red Cross

It will be obvious to you that the arrangement here proposed is primarily intended to provide for emergencies which may suddenly arise in any community, or, on the other hand, may happily never occur Thus it may be that the committee which we are inviting you to create may never be called into action, while, on the other hand, it may have occasion to perform a very great public service especially in case of war Your cooperation in the completion of this plan at as early a date as convenient will be appreciated

Please address all communications bearing on the contents of this letter to the Secretary, National Committee on Red Cross Medical Service, American Red Cross, Washington, D C

Very respectfully,

George M Kober, M D,
Chairman

Henry T Birmingham,
Colonel, Medical Corps, U S Army

T W Richards,
Surgeon, U S Navy

The formation of local committees in the American Medical Association, as outlined in the above circular, is most important It is urged that every member cooperate to the fullest extent in the humane work of the American Red Cross, which the Association desires to assist through these special committees

Rupert Blue
President of the American Medical Association

Resolution on Department of Health

Under the head of "new business," Dr Arthur T McCormack Kentucky, offered a resolution on a department of health which was referred to the Reference Committee

---

[27] Appendixes B and C, Regulations of the National Committee on Red Cross Medical Service and Information Regarding the correlated activities of the Council of National Defense and the Advisory Commission the Medical Departments of Government, and the Committee of American Physicians for Medical Preparedness, repeat material already published in The Journal, and are therefore omitted

Care of Infants and Children During the War

Dr H M McClanahan Nebraska, delegate from the Section on Diseases of Children, presented a report as follows, which was submitted by the Executive Committee of the Section on Diseases of Children in reply to questions asked by the Council for National Defense, concerning the care of infants and children during the war This communication was referred to the Reference Committee on Legislation and Political Action

Synopsis

The accompanying report has to do with

1 The most efficient disposition of the pediatrist in the present crisis

2 The importance of providing a sufficient number of trained women to meet the increasing needs of infant and child welfare

3 The proper organization of all infant and child welfare agencies nd activities

4 Increase of rather than diminution of activities in public health and of the work of existing infant and child welfare agencies

5 The importance of special activity on the part of agencies having tc do with

A Prenatal care

B The problems of illegitimacy

C The securing of the milk supply

D The care of children between the ages of 2 and 6 (the neglected period)

E Child labor

F Juvenile delinquency

6 The physical examination and medical supervision of boy scouts and all children a signed to farm or garden work

7 The importance of publicity concerning the care of the baby and the care of older children

8 Formation of a national program

Conditions may arise here or abroad in which men trained in pediatrics will be able to render valuable service under special commission—for example extensive epidemics of contagious disea e appalling infant or child mortality now or during the period of reconstruction

Even in times of peace there are not enough pediatrists in this country to meet the problems of infancy and childhood, and the demand of the government for medical men for war service is taking pediatrists from work for which they are especially trained work which is of greater importance to the country today than ever before. We suggest therefore that the teachers of pediatrics those devoting themselves exclusively to pediatric work and those devoting their time to problems of infant and child welfare can best serve their country by continuing to devote their energies to the solution of these problems

Therefore if your Council desires the American Medical Association will submit a li t of such physicians

The conditions which tend to lessen the number of pediatrists in the country are also effective in drawing on the groups of nurses especialy trained in the care and nursing of infants and children We recommend that every possible effort be made to prevent these especially trained groups from being called to military service

This shortage has already begun Even in normal times there are not enough nurses of this class to meet the demands We therefore recommend that all pediatris s occupying teaching and hospital positions be urged to aid in the training of women who may volunteer for nursing and welfare work

Authority should be given to some centralized organization designated by your board Committees on public safety or other similar bodies organized in various states probably have knowledge of the individuals and organizations best fitted to direct the work in their community having to do with the problems of infancy and childhood All the agencies interested in child welfare should be coordinated under one head and unnece sary duplication of effort obviated Committees should work in harmony with the local and state boards *of health* If the federal or state government give assistance for relief work these committees should be the agency through which the relief be given

No class of the community feels so quickly and so seriously the neglect of health measures as do children We therefore recommend that your Council call on all communities to see to it that there is no abatement, but on the contrary a decided increase of their activities along the lines of infant and child welfare This is to apply to all public and private agencies

A study of conditions in Europe brings out the following facts relative to infant and child welfare work and should be particularly emphasized

A. Prenatal Care The large number of child bearing women who have had to enter industry and the high cost of living with its resulting diminished rations have a tendency to increase infant mortality and the children born of such mothers tend to be premature or under the normal weight The mother s continuation in work diminishes her chances of nursing the baby and has shortened the period of lactation Forty per cent of the *infant* death rate occurs during the first month of life in this country as has been shown by a recent report of the Children s Bureau We therefore recommend that a definite rule regarding the employment of nursing mothers in factories be adopted and enforced Financial assistance should be given when necessary Factories and other industries where these women work should be required to make provision for suitable nurseries in order to facilitate breast feeding

B Illegitimate Infants Should illegitimacy become such a problem in this country as it has in Europe, we recommend that the mother be given state or federal aid

C Importance of the Milk Supply The experience of Europe has shown that after maternal nursing nothing is more essential to the health of infants and young children than adequate milk supply We should not make the mistake made in Europe of allowing the milk supply to become impaired The attention of the Department of Food Control and the Department of Agriculture should therefore be called to the necessity of preventing a milk shortage We protest against the whole ale slaughter of milch cows

D Neglected Period (aged 2 to 6) Children during this period have greatly suffered in Europe on account of the increase in the number of mothers employed in industry We deplore the breaking up of the home and recommend that special provision be made to keep the mothers with young children in the home Where this is impossible arrangements should be made for the care of young children of mothers employed

E Child Labor The breaking down of child labor laws in Europe has been so flagrant that unless immediate precautions are taken similar abuses are likely to arise in this country There is already seen in certain communities a tendency to break down existing laws of child labor The American Pediatric Society enters its protest against the repeal of any of the existing laws, and, on the contrary, urges their more rigid enforcement

We recommend a plan of supervision similar to that adopted by the National Child Labor Committee in Pamphlets 276 and 277

I The increase of juvenile delinquency in Europe during the war has been appalling In certain communities in England it has exceeded 50 per cent To prevent this tendency we recommend that special endeavor be made through all existing agencies for improving the conditions of the older children (playground associations and boys clubs etc)

At present there is no general or proper medical examination of boy or girl scouts to determine their physical fitness for their duties We recommend proper medical examination prior to admission and ub equent oversight This also applies equally to children detailed to work on farms

Publicity should be given through all existing organizations and when possible through the press, to infant welfare literature especially to be recommended is *Public Health Bulletin No 10* on the Care of the Baby ' Special effort should be made to see that the family of each enlisted man receives this and similar literature This can best be done by the local committees

Since innumerable organizations are distributing pamphlets and literature broadcast some of which are good and some poor we recommend that a central committee of pediatrists be appointed to review, standardize and approve such literature for wider distribution

The very laudable desire of our fellow citizens to render some service to their country has led to the formation of innumerable organizations much duplication of effort, great waste of energy and failure to attain results This distressing state of affairs in some states is actually interfering with the work of organizations of long standing, and equipped with trained workers We recommend therefore that your Council cooperate with the organizations recognized as representative in the various states in attempt to establish a method of coordination and cooperation by which all of this splendid energy may be used to the best advantage To this end we would suggest that you outline an organization and plan of procedure which may be utilized first as a means of gathering information on which pecific needs of each community may be determined and second as an agency through which these needs may be met

Insignia for Medical Students Not in Active Service

Dr Charles F Kuhn, Michigan presented the following, which was referred to the Reference Committee on Reports of Officers

One of the greatest hardships to come to the Fellow who is anxious and willing to serve is to be told he is beyond the age limit I do not think that any physician gets beyond the age when he is ready to strike a blow for his country The medical journals and preparedness boards have been asking our young men who are now in school or are contemplating a course of training to remain—they are in the hotbeds of enthusiasm—and so I desire to present the following resolution

Inasmuch as The Journal of the American Medical Association through its editorial columns and the Board of National Defense through its medical section, are urging all medical and premedical students to continue their studies and since to do so will be to subject a large class of enthusiastic and patriotic young men to the possible opprobrium of coward ' and slacker therefore be it

Resolved That the Michigan State Medical Society, in special session assembled does hereby urge on the General Medical Board of National Defense that a way be devised whereby all medical students or those about to enter medicine shall be recognized as being in their country s service, and that some insignia so designating *them* shall be given them be it further

Resolved That the secretary of the society be instructed to inform the chairman of the board, Dr Franklin H Martin, of the action of this society at once.

On motion the House of Delegates adjourned until 9 30 a. m, Tuesday, June 5, 1917

ADDENDUM

Report of the Secretary

[See page 1713, insert before last paragraph]

Under date of May 25, 1917, your secretary received the following letter signed by E F Howard, secretary of the Mississippi State Medical Association

At the recent meeting of the Mississippi State Medical Association, the following resolution was unanimously adopted by the House of Delegates

WHEREAS, The American Medical Association, through its House of Delegates, has given to its Judicial Council appellate jurisdiction in matters of discipline of county society members, and

WHEREAS, This action is entirely contrary to democratic principles and opposed to those ideas, formerly laid down by the American Medical Association, that constitute the basic principles of our organization, therefore, be it

Resolved, That the secretary be instructed to notify the American Medical Association that the Mississippi State Medical Association will not admit its jurisdiction in this matter, and insists that the county societies alone shall judge the qualifications of their members.

Dr Horace G Wetherill, Colorado, moved that inasmuch as the letter read by the Secretary did not come properly before the Reference Committee on Reports of Officers, it be referred to the Judicial Council

Seconded and carried

Report of the Board of Trustees

[See p 1713 Instead of Dr William T Councilman, Dr Thomas McDavitt, vice chairman, presented this report]

Report of the Council on Health and Public Instruction

[See page 1721, 1st column, line 36]

The Council has given careful consideration to this communication, and presents to the House of Delegates the following resolutions for its consideration

WHEREAS, It is the unanimous opinion of the Council on Health and Public Instruction of the American Medical Association that alcohol has no drug value, either as a stimulant as a tonic or as a therapeutic agent, and that it has no food value, and

WHEREAS, Its use as a beverage or as a therapeutic agent is detrimental rather than beneficial to the individual, therefore, be it

Resolved, That the House of Delegates of the American Medical Association, at its Sixty Eighth Annual Session, declares it is opposed to the use of alcohol by individuals either as a medicine or as a beverage, and be it further

Resolved, That its use in medicine is permissible only in the preparation and preservation of pharmaceutical products

(*To be continued*)

Trachoma in Amsterdam—Trachoma has long been prevalent at Amsterdam, and a committee was recently appointed to seek out the foci and suggest ways and means for an effectual campaign against it The committee report shows that among 73,480 schoolchildren, 1 39 per cent were found to have trachoma The proportion among the 7,062 Jewish children was 8 8 per cent while it was only 0 6 per cent among all the others The Jewish children who lived under better hygienic conditions, outside of the old ghetto, showed a much smaller proportion but even in them the proportion was larger than in the non-Jewish children In the private infant schools the Jewish children showed 32 1 per cent with trachoma while in the public infant schools the proportion was only 10 7 per cent Four foci were found in different parts of the city, including the ghetto The old experience that trachoma is rare among the well-to-do was confirmed by the committee's investigations It was found further that over half of those with trachoma had never had any treatment for it The committee recommends examination of all children at the fifth year and further examination every year of those recorded as having had trachoma Treatment should be by experts in a special trachoma dispensary, easily accessible and open all day The committee does not advise compulsory treatment, but merely that children recorded as having trachoma should not be admitted to school without a certificate that they had been treated Treatment in the school building is not desirable, and it is not necessary to have special schools for the trachoma children, but in the school rooms they might have their seats together in a certain quarter of the room

PARIS LETTER

PARIS, May 17, 1917

Death of Landouzy

Louis Landouzy, professor of the medical clinic and dean of the Faculty of Medicine of Paris, has just died at the age of 72 He was born in Rheims in 1845, and was the son and the grandson of physicians residing in Rheims, where he began his studies He finished his training at Paris, to which city he went in 1867, and was appointed hospital physician in Paris in 1879, and assistant professor of the Faculty of Medicine the following year He obtained the chair of therapeutics in 1893, but as soon as the first professorial chair in the clinic became vacant, he gave up instruction in therapeutics, and became, in 1901, a professor in the medical clinic In the course of the same year he was elected dean of the Faculty of Medicine, and since that time continued to fill that office He has been a member of the Academy of Medicine since 1894, and in 1913 was elected member of the Academie des sciences Landouzy used a certain brusque authoritativeness, speaking and writing in a language which he was fond of seasoning with neologisms From the beginning of his career, Landouzy was occupied chiefly with neurologic questions In 1874 he described a type of progressive muscular atrophy, beginning with the face in infancy, and not accompanied by lesions of the marrow or the nerves This progressive atrophic myopathy is known today as "atrophic myopathy, type Landouzy-Dejerine" Later, Landouzy directed his attention mainly to the field of tuberculosis We owe to him notably the demonstration of the tuberculous nature of frankly acute pleurisy We owe to him also the demonstration of the frequency and the special forms of tuberculosis in children During the last few years he took a great part in the fight against tuberculosis, and since the beginning of the war he has never ceased to plead the cause of soldiers rejected on account of tuberculosis, claiming for them, with great energy, the benefits of obligatory assistance

In 1899, Landouzy organized visits to the French mineral springs, which he termed "journeys for medical study" Up to 1913 he spent his vacations each year visiting twenty different mineral springs at the head of a group of French and foreign physicians Landouzy was one of the directors of the *Presse médicale* and the *Revue de medecine*

The War

THE NEW STATUS OF THE ARMY MEDICAL SERVICE

The secretary of war has just submitted a report to the president of the republic, in which attention is called to the fact that, in view of the development shown by the army medical service, the scope of its installations, the extent of its personnel and its equipment, it becomes necessary that it be given greater freedom of action, in order that it may continue to progress and adapt itself rapidly to the needs of the present war It is indispensable that, while subject to the higher authority of the general staff, it may be assured of its part in the general collaboration and of the disposition of its means of action The secretary of war also proposes to introduce a bill, modifying the rights and prerogatives of the officers of the health service, but in the meantime, in order to take immediate action, the president of the republic has signed the decree which provides that the personnel of the health service shall occupy identically the same position as regards control and personnel which is occupied by the different branches of the armed service The personnel of the health service shall be eligible to serve on any staff and under the same conditions as the officers of the different branches of the armed service It will give to the general staff all the information found desirable as regards existing resources and necessary equipment in the way of personnel and supplies It will assist in the working out of orders and will provide for their direct transmission

RURAL CONVALESCENT HOMES FOR THE WOUNDED

The secretary of agriculture and the undersecretary of state attached to the military health service have recently submitted a communication to the prefects of the several departments and to the directors of the health service which provide for the creation of rural hospices Experience has shown, in fact, that in a great number of cases convalescents, who up to the present time have been treated entirely by mechanical physiotherapy improved more rapidly through the agency of work Consequently, it has been decided that in all the sections of the country in which they do not exist already rural hospices shall be created near the center for physiotherapy These rural hospices will be installed in the towns and villages, or better still in the open country They will comprise from twenty-five to 150 beds and from the administrative point of view will constitute an annex of the center of physiotherapy The measures put into execution by this communication moreover will have the result of placing at the disposal of the farmers a supplementary contingent of farm laborers

RESTRICTIVE MEASURES PERTAINING TO FOOD CONTROL

The director of food control has instructed bakers, beginning with May 1, to cease the manufacture of cakes containing flour as an ingredient He has permitted them to use rice in place of flour in the preparation of cakes The chief cake bakers have united and have chosen a committee to make up new recipes which require no flour In order to make these recipes better known they will publish a small collection of them This will permit the bakers to continue their trade in spite of the restrictive regimen

On the other hand, the experience with the evening meals without meat (The Journal June 2, 1917, p 1643), not having given the expected results the director of food control has decided to go back to the restrictive measure which he previously introduced which provides for two days without meat horse meat however, is permitted every day In fact, a delegation of the butchers interested made a demand on the secretary of food control not to include horse meat in his decree restricting the consumption of meat In support of their request they urged that the horses to be slaughtered, coming from the French and English armies are in such quantities that they could not dispose of them all if restrictive measures limited the consumption of horse meat The delegation furnished the director the following figures In January 1914, the abattoirs of Vaugirard at Paris slaughtered about 4900 horses, in January 1915 a little less than 2,000, in January 1916 about 3,000, in January, 1917, 5000 If the restrictions were imposed on the trade in horse meat the delegation added about forty horses for the two days of prohibition provided for by the decree would be lost from the standpoint of consumption, and that to no purpose

FIELD HOSPITAL PRESENTED TO THE RUSSIAN ARMY BY FRANCE

Justin Godart, undersecretary of state for the military health service recently presided at the presentation of a field hospital given by France to the Russian army This sanitary equipment, of an entirely new plan and provided with the latest types of instruments, is the outcome of a subscription taken up throughout France and the colonies (The Journal, April 7 1917, p 1053) It consists of fifty-two vehicles of which twenty are for the transportation of the wounded, and twenty-three are trucks for the transportation of material equipment It comprises likewise a receiving station a waiting room for the wounded an examining room, a Roentgen-ray laboratory, and an operating room The instruments were manufactured in the shops of the military health service The personnel comprises 120 nurses and eighty-five chauffeurs The medical personnel comprises twenty-three officers, among whom are physicians and pharmacists and administrative officers

ACTIVITY OF THE AMERICAN FIELD SERVICE

The formal presentation of the American flags given by Clarence Mackay to the seventeen sections of the American field service recently took place in the midst of a large gathering, which included distinguished men of the American colony At the present time the American field service already consists of seventeen sections, of which fifteen are at the front in France and two at the front in the Orient. These sections are served throughout by Americans who volunteered for service in the French army Many of them have been serving in our ranks since the beginning of the war At the present time it is in a position to offer each week to France a section for sanitary service composed of twenty-five men, with ambulance material and equipment, furnished entirely by Americans together with a section for transport service composed of fifty men, for which the material equipment is furnished by the French government.

LONDON LETTER

London, May 19, 1917

The War

ARRIVAL OF UNITED STATES MEDICAL CORPS

A complete unit of the United States Medical Corps, with a personnel of over 200 including sixty-five nurses, has landed in England It is in charge of Major H L Gilchrist who was summoned from the Mexico border to take command The men were selected from a large number of applicants who, according to Major Gilchrist were "crazy to get here as fast as they can" On arrival of the vessel bearing the contingent, it was boarded by a British general and his staff and the unit was paraded for his inspection They presented a smart appearance in uniforms like those of our Australian troops The men are principally literary and law students recruited from Harvard, the Western Reserve University Oberlin College Allegheny College, the University of Pittsburgh and the Ohio State University The nurses come from Lakeside Hospital With the unit as director is Major G W Crile, Ohio The British general addressed the members of the unit from a rostrum on the saloon deck with the Stars and Stripes on one side and the Union Jack on the other He welcomed them on behalf of the British Army and thanked them for what they were about to do

THE FOOD SUPPLY

In the House of Lords the food controller Lord Devonport stated that the control of supplies is growing in many directions The shortage of potatoes led to an increased demand for substitutes such as turnips and beans with the result of a great rise in price of these commodities As far as possible the government is attempting to prevent the inflation of prices Thus Lord Devonport found that beans shipped from Burma and not due to arrive for some weeks had been sold over and over again by speculators until in one case the price was in the region of $450 per ton He sent for the importer and told him that this would not be allowed, and succeeded in taking over the original contract at a price of $385 against a market ruling price for the moment of $420 Steps are being taken further to reduce unnecessary imports so as to reserve all the shipping available for supplies of prime necessity He was able to make a gratifying announcement in view of the severe danger to food supplies which the submarine campaign at one time seemed to threaten "If the call for reduction in the use of breadstuffs is responded to—and it is being responded to—and if the efforts of the submarine are not successful beyond reasonable likelihood, we shall get through as regards breadstuffs with a fairly satisfactory balance in hand until our new harvest becomes available" Since this announcement, the depredations of the submarines have decreased As regards the supply of meat there is little trouble The imports are only slightly less than in the corresponding period of last year, and our home herds are as large as if not larger than at any previous period As the meatless day has increased the consumption of cereals, it has been abolished Turning to fats, the supply of butter margarin and lard is better than last year The government is now importing all cereals, barley, rye, oats flour etc In addition it has taken over the control of mills so as to make certain that these are supplied according to their capacity and also that the supplies may be distributed so as to meet the demands in every direction Although, excepting potatoes, there is no shortage of food prices are high and are now 98 per cent. greater than before the war But if eggs are omitted from the dietary, margarin substituted for butter and the consumption of sugar and fish reduced to one half of that prevailing before the war, the percentage can be reduced to 65 Compared with a year ago, prices show an average increase of 29 per cent, potatoes show an increase of 65 per cent., and cheese and eggs of nearly 50 per cent

GERMAN PHYSICIANS CONDEMNED

The following resolution has been published by the medical authorities of Scotland "The faculties of medicine of the Scottish universities together with the presidents and councils of the Royal College of Surgeons of Edinburgh and of the Royal Faculty of Physicians and Surgeons of Glasgow, desire to record their condemnation and detestation of the neglect and inhumanity which characterized the conduct of certain members of the Prussian medical staff to whom the treatment of British prisoners of war was entrusted, especially in the internment camps at Wittenberg and Cardlegen during outbreaks of typhus fever which had been largely provoked by overcrowding, insufficient food, and entire absence of all sanitary measures The facts, as stated in the recent reports of a British government committee, which are based mainly on the testimony of officers of the Royal Army Medical Corps, themselves prisoners of war, are of such a nature as to bring indelible disgrace upon the physicians concerned, and upon the German government, which remains ultimately responsible for the treatment meted out to prisoners of war As members of a profession which has hitherto, in every quarter of the civilized world, been inaccessible to the shameful influences which make for barbarity in warfare, we are reluctantly forced to the conclusion that a spirit of gross inhumanity has not been absent from the Prussian medical service"

THE MEDICAL SERVICE IN MESOPOTAMIA

The perfection which the medical service has attained on the western front has been described from time to time in previous letters Unfortunately in the Mesopotamia expedition the conditions were far different, a fact principally due to difficulties of transport A great improvement has now been reported by Sir Arthur Lawley, chief commissioner in Mesopotamia of the British Red Cross He first visited Bombay and inspected several hospitals, including one for officers in the Gwackar of Barodahoues He found that, in all, structure, equipment and personnel were first rate He then sailed to the base of the Mesopotamia expedition, Basra, in a hospital ship, and inspected the arrangements made for the reception of the sick and wounded, and on arrival saw the ship loaded Nothing was left undone that could add to their comfort The Red Cross river launches on the Tigris had proved invaluable in the evacuation of the wounded From the firing line to the base at Basra there was not a hospital unit afloat or ashore to which Red Cross comforts had not been issued with a generous hand Communications of every kind by road and river have now been laid out and developed on a well thought out plan, and medical equipment has been introduced on a lavish scale An ample water supply is assured at every camp A new type of ferry boat (not a hospital ship) for the rapid evacuation of the wounded has been introduced and is admirably adapted to its purpose Sir Arthur Lawley went up the river on the eve of the storming of the Sanna-i-Yet position, and was able to visit the advanced dressing stations while the first wounded were being brought in They were carried back by Red Cross launches on the river or motor ambulances on land The first roar of the bombardment began at 10 a m, and the first batch of wounded were in the field ambulance at noon The first consignment, their wounds dressed, their stomachs filled, and their cigarets alight, were down stream by 4 p m

THE EFFECT OF LIQUOR CONTROL ON ALCOHOLISM

The war has led to a stringent control of the liquor traffic. The hours during which saloons are open are greatly shortened, alcoholic drinks are sold in a much weakened form, and the price of the most widely used one, beer, has been trebled The results were reviewed by the chairman of the board of control, Lord d'Aberon, at the Royal Institute of Public Health He maintained that in the public health legislation of this country the significance of the liquor traffic as affecting the health and wellbeing of the community had been neglected The problem had been viewed as a social one belonging to the sphere of morals rather than to medicine, with the result that the evils had continued unchecked He advocated restrictions directed especially to limiting the conditions which lead to excessive indulgence The two main restrictions concerned the strength of alcoholic beverages and the times during which their consumption is permitted in saloons During the war these had been reduced for over two years and the results were now available. In 1914 the deaths from alcoholism showed a slight upward movement In 1915 there was a slight opposite movement The policy of restriction came into force in the second half of the year In 1916 the decline in deaths from alcoholism was enormous, amounting to over 40 per cent for men and nearly 50 per cent for women, as compared with the standard of 1913 Similarly the convictions for drunkenness showed a fall of nearly 60 per cent in the case of men and over 40 per cent in women

Marriages

Lieut William Frederick Williams, M O R C, U S Army, Cumberland, Md, to Miss Virginia Ellen Mann of Sacramento, Calif, May 22

Lieut William Byrd Hunter, M O R C, U S Army, Fort Bliss, Tex, to Miss Mary Olive Kinsey of El Paso, Tex, May 19

Lieut David Norvell Walker Grant, M C, U S Army, to Miss Dorothy C Krayenbuhl, at Colon, C Z, May 14

Lieut Clifford Hood Arnold, M C, Pa N G, Chester, Pa, to Miss Audrey Trayser Dillon of Richmond, Va, June 5

John A Roberts, M D, Waukesha, Wis, to Miss Fredericka Wehrman of Madison, Wis, in Chicago, recently

Morgan Otto Barrett, M D, Troy, N Y, to Miss Dorothy Julia Healy, at New Rochelle, N Y, May 18

Edward Peirson Richardson, M D, Boston, to Miss Clara Lee Shattuck of Brookline, Mass, May 25

Frank Whipple Snow, M D, Newburyport, Mass, to Miss Rosamond Bean of Boston, May 21

Merrick Fiefield McCarthy, M D, to Miss Marjorie Porter, both of Cincinnati, May 19

Charles Augustus Williams, M D, to Miss Irene Schoof, both of Doland, S D, May 23

Perry Gilbert Lush, M D, to Miss Mayme Holpunch, both of Chicago, May 9

Emanuel Friend, M D, to Miss Magdalene Alexander, both of Chicago, May 26

Heman Laurence Dodd, M D, to Miss Alice Richard, both of New York, May 24

Deaths

Francis Henry Brown, M D, Boston, Harvard Medical School, 1861, aged 81, formerly a Fellow of the American Medical Association, a member of the Massachusetts Medical Society, once president of the Suffolk District Medical Society, a member of the American Academy of Medicine and American Public Health Association, founder, secretary and consulting surgeon of the Children's Hospital, Boston, formerly Passed Assistant Surgeon, U S P H S, aural surgeon to the Boston City Hospital, a veteran of the Civil War, in which he served as acting assistant surgeon, U S Army, formerly surgeon to the Boston Dispensary and to St Joseph's Home, and physician to St Elizabeth's Hospital, editor of the *Boston Medical and Surgical Journal*, who was struck by a street car while crossing the street in front of his residence in Boston, May 13, died in the Boston City Hospital, two days later, from his injuries

Thomas Charles Fitzsimmons, M D, Fairview, Pa, Bellevue Hospital Medical College, 1884, aged 59, a Fellow of the American Medical Association and member of the Philadelphia Psychiatric Society, medical superintendent of the State Hospital for the Insane, Fairview, formerly city physician of Scranton, Carbondale and of Fell Township, a member of the state commission to erect a state institution for the care and treatment of epileptic and feebleminded, died in the Medico-Chirurgical Hospital, Philadelphia, May 17, after a surgical operation

William Reed Thompson, M D, Washington, Pa, Jefferson Medical College, 1867, aged 80, a Fellow of the American Medical Association, once president of the Washington County Medical Society, and one of the best known practitioners of Pennsylvania, one of the organizers of the Washington City Hospital, for many years a trustee of Washington and Jefferson College, died in the City Hospital, Washington, April 17, from injuries received the day before, when he was struck by an automobile while crossing a street.

David Walker, M D, Portland, Ore, Queen's University, Dublin, Ireland, 1856, M R C S Ireland, 1857, aged 79, surgeon of the *Aberdeen* and the last surviving member of the McClintock Expedition sent to find Sir John Franklin's party, in the Arctic in 1857, for sixteen years a surgeon in the United States Army, died at the home of his daughter in Portland, May 11, from heart disease.

Harry Lane, M D, Washington D C, Willamette University Salem Ore 1876, aged 61, a member of the Oregon State Medical Association, United States senator from Oregon since 1913, formerly a practitioner of Portland for one term superintendent of the Oregon State Insane Hospital, and twice mayor of Portland, died in a hospital in San Francisco May 23, from cerebral hemorrhage

Charles Keepers Bruner, M D, Greenfield Ind, Rush Medical College, 1886, aged 59 a Fellow of the American Medical Association, once president of the Hancock County, Ind Medical Society for several years local surgeon for the Pennsylvania System and the Terre Haute Indianapolis and Eastern Traction Company, died at his home, May 6, from heart disease.

Cora Sechrist Fletcher, M D, Cleveland, Woman s Medical College of Pennsylvania Philadelphia 1896, aged 45 a specialist in the diseases of the eye and assistant ophthalmologist to the Cleveland General Hospital, a member of the staff of the Cleveland Woman s Hospital, died at her home about May 13

Horace Ludington, M D, Omaha University of Pennsylvania Philadelphia 1855, aged 84, major surgeon of the One Hundredth Pennsylvania Volunteer Infantry during the Civil War, for several years connected with the Quartermaster s Department of the Army, died at his home May 16

Edward C Thomas, M D., Philadelphia, Hahnemann Medical College Philadelphia 1892, aged 54, died in the Presbyterian Hospital Philadelphia May 13 from the effects of a gunshot wound of the head self-inflicted it is believed with suicidal intent while despondent on account of neuritis

Alexander Montgomery, M D., Eau Claire Wis, Illinois Medical College, Chicago 1898 aged 54 formerly a Fellow of the American Medical Association, a member of the State Medical Society of Wisconsin, founder of the Montgomery Hospital Eau Claire, died at his home April 11

Isaiah G W Steedman, M D., St Louis, Tulane University 1859 aged 82 a member of the Missouri State Medical Association colonel in the Confederate service during the Civil War president of the Curtis Manufacturing Company, St Louis died at his home, May 15

Jonathan R Umstead, M D., Quakertown, Pa, Jefferson Medical College 1888 aged 52, formerly a member of the Medical Society of the State of Pennsylvania, for twelve years deputy coroner of Bucks County, died at his home, May 15 from typhoid fever

George Philip King, M D., Lancaster, Pa, Jefferson Medical College 1879 aged 57, a Fellow of the American Medical Association visiting physician to St. Joseph s Hospital Lancaster, died at his home May 14 from cerebral hemorrhage

Richard Louis Stuart, M D., Des Moines Iowa, College of Physicians and Surgeons Keokuk Iowa 1874, aged 63, formerly a Fellow of the American Medical Association a member of the Iowa State Medical Society, died at his May 15

Clayton E Spire, M D., Jordan N Y Cleveland University of Medicine and Surgery, 1897, aged 40, while driving over a grade crossing in his automobile May 17 was struck by a New York Central train and instantly killed

John Harvey Donnell, M D, Tarentum, Pa., Western Pennsylvania Medical College Pittsburgh 1892, aged 54, was struck and instantly killed by a Pennsylvania train at a grade crossing in Tarentum May 16

Benjamin K Thomen, M D., Baltimore, Ohio Miami Medical College, Cincinnati 1871, aged 86, for half a century a practitioner of Baltimore, died at the home of his son in Columbus Ohio, May 6 from uremia

Robert Wirt King, Gordonville, Tenn. (license, Tennessee 1889), aged 70, formerly a Fellow of the American Medical Association, a member of the Tennessee State Medical Association died at his home, April 2

William Francis Smith, M D, Malden Mass, Tufts College Medical School, Boston 1914, aged 26, formerly a Fellow of the American Medical Association, died at his home, May 15 from tuberculosis

Alvah A Warren, M D., Pawtucket, R. I, Baltimore University School of Medicine 1907 aged 43, a member of the Rhode Island Medical Society, died at his home, March 19 from pulmonary tuberculosis

Etienne Lartigue, M D., Gainsville, Fla, Baltimore Medical College, 1897, aged 46, a member of the Florida Medical Association and special agent of the state board of health, died at his home, May 11

Joseph Long Thistle, M D, Washington, Pa, Jefferson Medical College 1886, aged 61, a trustee of Washington and Jefferson College, died in the Washington, Pa, Hospital, May 5 from peritonitis

Clement T Guillaume, M D, Boonville, N Y, Eclectic Medical Institute Cincinnati 1880, aged 60, for many years a practitioner of Utica N Y, died in Utica, May 10, from a nervous breakdown

Douglass Howell Morse, M D, Los Angeles, Johns Hopkins University Baltimore 1910, aged 31, a member of the Medical Society of the State of California, died in Los Angeles May 8

Lewis Lee, M D., Potter Valley, Calif, American Medical College St Louis 1888 aged 60, died in the Harbor Emergency Hospital San Francisco, April 25, from cerebral hemorrhage

Aura Roswell Lamb, M D, Washington Mich, Detroit College of Medicine and Surgery, 1888 aged 53 a specialist in ophthalmology, died at his home, April 21, from chronic asthma

William C Bode, M D, Pittsburgh, University of Würzburg, Germany 1877, aged 69, a member of the Medical Society of the State of Pennsylvania, died at his home, May 10

J W Applewhite, Gustine, Tex (registration Texas years of practice 1907), aged 76, a member of the State Medical Association of Texas, died May 5 in a hospital in Temple, Tex

Henry Clay Mitchell, M D., Hughesville, Mo, Missouri Medical College St Louis, 1898, aged 43, died in Grace Hospital Kansas City, Mo April 3 from lobar pneumonia

Henry Ingle, M D, Gainesville Tex, Georgia College of Eclectic Medicine and Surgery, Atlanta, 1888, aged 80, also a dentist a Confederate veteran, died at his home, May 5

Aziel Henry Crouch, M D., Mounds Okla, Missouri Medical College, St Louis 1891 aged 56, a Fellow of the American Medical Association, died at his home, February 20

George Milton Bradfield, M D, San Francisco, Jefferson Medical College 1890, a member of the Medical Society of the State of California, died recently at Los Angeles

Joseph C Watson, M D, Gary Ind, Indiana Medical College Indianapolis 1878, aged 57, died in a sanatorium in Rockford Ill., May 1 from cerebral hemorrhage.

John C Walker, M D., Salem Ohio, Eclectic Medical Institute Cincinnati, 1881, aged 62, died at his home, May 16 from the effects of an overdose of morphin

Louis Plumer Posey, M D, Philadelphia, Hahnemann Medical College, Philadelphia, 1883, aged 54, died at his home May 15 from organic heart disease

Benjamin Janney Rudderow, M D, Philadelphia, University of Pennsylvania, Philadelphia, 1874, aged 63, died at his home May 17 from acute gastritis

Alfred Grant Hopkins, M D., Burlington, Ia, College of Physicians and Surgeons Chicago, 1890, aged 77, died at his home May 5

George Vader Parmelee, M D, Salt Lake City Homeopathic Hospital College, Cleveland, 1878, aged 62, died at his home May 7

Richard H Gillen, M D., Seattle, Jefferson Medical College 1871 aged 70, died at his home, April 27, from cerebral hemorrhage

M F Gray, Cove, Ark (license Ark 1903), aged 63, for forty-two years a practitioner of medicine, died in his office, May 16

Ezra Styles Abney, Blythewood, S C, a practitioner since 1870 died at his home, March 19, aged 81, from senile debility

Michael Francis Cole, M D, Columbus Ohio, Homeopathic Hospital College, Cleveland, 1884, aged 60, died at his home, May 1

John W Hutton, M D., Cedar Rapids, Iowa, Washington University, St Louis, 1883, aged 61, died at his home, May 5

William T Matthews, M D., Charleston Miss, Tulane University, New Orleans, 1887, died at his home, April 15

Daniel B McLean, M D, Brumfieldville, Pa, Jefferson Medical College, 1873, died at his home, May 15

Correspondence

FIRST MONTH'S SERVICE, MEDICAL RESERVE CORPS

To the Editor —It was a month ago today that I was directed to report to Capt Joseph Casper for service as a medical reserve officer of the United States Army It was not my first experience with government work or army details, but so many changes take place from day to day in the organization and management of every big enterprise that I found many new things to learn Therefore, I took up the work as a regular novice and tried to learn the details as they came up and anticipate what should be done

The first thing I learned of great value was the necessity of systematically and methodically doing the thing which must be done many times over and over and doing it in exactly the same way The task which confronted us was examination of a large number of applicants for the Officers Reserve Corps camp of instruction which is now in progress at the Presidio in San Francisco The work had to be done, there was a limited force to do it, and the assistants were not then so well trained to render valuable service as they now are But everybody turned to and stood by until that portion of the task was completed It is inspiring to work under men who are workers themselves, and about the hardest working man in our force was the officer in charge The applicants were a fine class of men from all parts of the state and many of them from adjoining states It was necessary to reject some of them even after they had been passed on elsewhere This brings me to the point of saying what I have often said before in connection with examination work that when a family physician sends his patient before a board with a letter, or a statement, he must always remember that practically all members of the board are "from Missouri"

Examination of recruits is not an arduous task It calls simply for the application of common medical sense which every medical man should possess There are standards which must be adhered to if the United States is to have an efficient army For the civilian physician who expects to enter the Officers Reserve Corps it would be good practice to sit down with the head mirror and renew his acquaintance with the method of finding the membranum tympani or the turbinates of the nose, or the deviation of the septum of the nose The lungs should be carefully gone over, and a familiarity of the sense of touch with the normal body temperature should be cultivated A little respiratory roughness, a little extra warmth of the skin, verified by the use of a thermometer, may save the government great expense The heart sounds should be understood and the difference between organic and functional murmurs differentiated Hernias and relaxed inguinal rings deserve special attention Getting down to the most important part of the body, that below the shoe tops, except that above the collar, the feet require special consideration As the strength of the army depends on the condition of the feet of the soldiers in that army, the feet should be most carefully inspected Let it be remembered that the shape of the normal foot is like a wedge Almost every applicant to be examined will wear shoes from one-fourth to 1 inch too short It is hoped that after they enter the service they will wear shoes of the proper length If the instructions laid down in Colonel Munson's book, "The Soldier's Feet and the Military Shoe," are followed, the feet will be properly shod It is with great personal sacrifice that this service is being rendered, but it is a work which must be done, and it appears to me that the sooner we get at it, and the sooner we do it, the quicker it will be done, and the sooner we shall become adjusted to the changed order of things

The officers of the regular medical corps with whom I have come in contact have been most courteous, patient and obliging, and if every civilian physician who enters the service meets with the agreeable conditions which have marked my first month's service, he will look on it as a most valuable experience

Charles Gross, M D, San Francisco

Social Medicine, Medical Economics and Miscellany

THE DISPENSARY ON A WAR BASIS

The Use of the Volunteer Worker

Charles Hendee Smith M D
New York

The dispensary problem in New York and in many other large cities is always an acute one There are so many institutions with outpatient departments that it is never possible to get quite enough physicians to man them properly The policy of many hospitals has tended to discourage attendance in the outpatient departments, for there has been no close connection with the ward services, no hope of advancement, and no effort to give the dispensary men an opportunity to learn more than they can teach themselves There are too many patients for the physicians who do attend, and this has resulted in careless, hasty work in the majority of instances The histories are usually short and incomplete, the diagnoses of the "snap" variety, and the patient receives little or no treatment worthy of the name Only within the last few years has there been any effort to systematize dispensaries, and to approximate the kind of work done in the wards This is true even today in only a small proportion of the dispensaries of the city

The outbreak of the war at once made this situation more acute than ever The physicians who work in dispensaries are mostly young men, many of whom are foot-loose and able to volunteer for military service Some have already been called, and many more are members of the Medical Reserve Corps or various hospital units, liable for service at any moment The war will surely increase the number of patients applying for treatment The inevitable higher cost of living will increase the relative poverty, and the removal of large numbers of soldiers from the families of the poor will diminish the family incomes even when the soldiers are not the heads of families or sole wage earners This all means greater congestion and consequent neglect and suffering among the sick poor of the city

In an effort to meet this situation, a plan has been devised by the Children's Medical Division of Bellevue Hospital, and it is presented here in the hope that it may prove of use to other institutions facing a shortage of medical men

The outpatient department of this division has been reorganized during the past year, and an effort has been made to raise the standard of work Special classes have been formed for many conditions which lend themselves to class or group treatment Among these may be mentioned infant feeding, heart disease, malnutrition, syphilis, enuresis, vaginitis, nephritis, tuberculosis suspects, eczema and allied conditions Each man has devoted one day a week to the general clinic (which includes all new cases, and old cases of miscellaneous character), one day a week to the infant feeding class, and one day to one of the other special classes By this arrangement it has been possible to free each man from routine on one of his three days, and give him time to work at a problem This tends to continue his interest, and also makes possible some advance in the study and treatment of outpatients By the use of printed forms of various kinds, diet lists, hygiene instructions, and follow up and cross index cards the work had already been improved and facilitated greatly At the outbreak of the war there were eighteen physicians and two interns working in this department This gave an average attendance of about nine physicians a day The number of patients averages about seventy-five (running from fifty to 100), which is not an excessive proportion for each doctor There are eight paid social service workers in the division, two or three on duty each afternoon in the outpatient department A clerk, clinic nurse and messenger complete the regular staff During the winter two or three volunteers have been assisting in the infant feeding room, weighing babies, taking temperatures, and helping with the follow up system

The war took several of the men at the outset and several more are waiting to be called It became evident that something must be done to avoid being forced back into the old methods of hasty and careless work The possibility of getting other physicians seemed hopeless and there were no funds available for paying clerks The volunteers had done such admirable work that it encouraged us to try to get more Through the physicians working in the division several women were induced to volunteer and they proved themselves so useful that an appeal was sent out for a large number Through some of the early volunteers the National League for Women's Service was interested and later the Social Service Training School of Teachers College and the alumnae of Miss Spence's School The event proved what we all believed must be true that there are many women who are willing and eager to do work of this kind if it can be shown that the work is needed and that it is a civic as well as patriotic service Besides helping to care for the sick poor, every volunteer helps to fill the place of a physician who has gone to the army or navy At present after about six weeks trial, over thirty women are enrolled and many have been turned away for lack of room, or referred to other hospitals A few have dropped out after one or two visits but the majority have been very regular, and several want to come on more days than they are needed Each volunteer attends on from one to five days a week according to the time which she has available and to the needs of the department

The system which has been evolved is as follows Six or eight volunteers are on duty each day and reach the outpatient department somewhat before the hour at which the physicians are due They start at once to take histories on new patients By the use of form histories an untrained but intelligent woman can take a perfectly good history after a little instruction and two or three days' experience The physician who examines the child can amend or add to the history if necessary but this takes only a short time as a rule During the taking of the history the volunteers are urged to discuss with the mother the habits and hygiene of the child and to suggest to her such matters as the importance of a proper diet, retiring early, cleanliness, fresh air etc The volunteer also gives out a diet list and a slip with general rules for the care of the child and goes over them with the mother, laying stress on the points in which she has found that the child needs attention This makes the mother feel that the volunteer is not a mere clerk, and gives the latter an interest and sense of responsibility which relieves the tedium of the history taking and introduces a human element into the relation

The child is then weighed measured, and the temperature is taken, all of which can be done by any one with little experience He is then stripped for examination and covered with a blanket or overcoat while waiting for the physician The volunteer is expected to be present during the examination of the child so that she may know of the diagnosis and see anything of interest which the child presents The physician writes the physical examination, and by the use of the printed form this takes only a moment. He then tells the mother and volunteer what should be done for the child, gives general and special advice, lays stress on the points which the volunteer has spoken about and writes the prescription for medicine on a pad, the volunteer then writes out in full the advice given and copies the prescription on the chart, sees that the mother understands the directions, reiterates the important ones and tells the patient when to return This is all time-consuming work which should be done for every patient if he is to receive the care to which he is entitled yet most of it must be omitted in a great many cases when the hurried physician is responsible for it all The chart bears the name of the historian as well as that of the physician, so that the clerk may know which volunteer is interested in the patient on the return visit, and the latter thus has an opportunity to watch the progress of each patient

Experience shows that each physician can examine and treat as many patients as can be handled by three historians so that this plan saves about three quarters of his time Every patient leaves the department with a fairly accurate history a complete examination, a diet list, hygiene instructions, and with better treatment and advice than can be given by any imaginable system in which the physician would have to do all the work The enthusiasm of the volunteers is also invaluable, because they are fresh at the work Late hours bad diet, tea coffee constipation and the other almost universal hygienic errors are all too old a story to the medical mind yet if any child is allowed to leave a dispensary without effort to correct his faulty habits of life that dispensary has failed in its duty to the child We believe that this is true no matter what the reason for which the child is brought There are few exceptions to the rule that there is always more wrong with a child than the ailment which has attracted the mother's attention Children brought for a "cold" are undernourished and may have grave organic disease Children brought for heart disease may have half a dozen other physical defects and no heart disease to say nothing of the certainty that three or four bad habits of living can surely be discovered

In the special classes the volunteers are also invaluable They take histories, fill out special return visit forms for the cardiac and malnutrition classes and assist the social workers in the general work of the classes, such as weighing children taking temperature etc In the infant feeding room the volunteer in charge with one or two assistants weighs the babies explains making of formulas, and gives demonstrations of bathing advice about clothing and talks on the evils of pacifiers flies etc This frees the social service worker from much routine and enables her to devote more time to real social service work The volunteers also keep the follow up index cards and send out postals to mothers who do not return regularly Without some such system many of the patients will not return and much of the work done is therefore wasted

With modifications this plan can be adapted to nearly every class of outpatient work. The printed form history is an important factor in this plan, but nearly all histories must have certain facts on them, and these can be printed, leaving larger spaces for some other facts which perhaps vary in other classes of patients more than in the case of children Although our appeal for help was made on account of a shortage of physicians caused by the war, we hope that we can continue this plan indefinitely There certainly is enough work to be done and enough interest in the work to attract and hold women of the kind who are anxious to do something to help the sick and poor Many physicians continue in dispensary work for years from the pure human interest in it long after they have ceased to learn anything from the routine Why should not the women of the country who have idle hours on their hands spend some of them this way?

Since the volunteer system has been started at Bellevue it has also been adopted in some of the departments at the Presbyterian and St Luke's hospitals and is being considered by several others There seems to be no good reason why it should not be developed widely, and its scope increased into further aid to the social service work in the homes of the poor Volunteers have been used in the hospitals of Boston for several years but not in quite this way Our experiment has been so successful that we believe it offers a great help in the solution of the dispensary problem in peace as well as in war

253 West Seventy-Fifth Street

Dust in Mines and Metallurgical Plants

The effects of dust on employees is dealt with in Technical Paper 153 of the Public Health Service by P A Surg J A Watkins of the service In a bulletin summarizing the article it is said dust may act injuriously (1) by irritant action, (2) by toxic action, and (3) by mechanical action Dust may sometimes be both irritating and toxic An example of irritating dust is that from flint chert or similarly siliceous rocks, the particles of which are hard and sharp injuring, when inhaled, the delicate lining of the respiratory tract, forming fertile locations for pathogenic organisms such as those of common cold, influenza, pneumonia and tuberculosis This type of dust is responsible for inflammatory conditions of the nose

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA Montgomery, July 9 Chairman, Dr S W Welch, Montgomery

ALASKA Juneau, July 3 Sec, Dr H C DeVighne, Juneau

ARIZONA Phoenix, July 2 3 Sec, Dr John W Thomas, 306 Goodrich Bldg, Phoenix

CALIFORNIA San Francisco, July 10 Sec, Dr Charles B Pinkham, 529 Forum Bldg, Sacramento

COLORADO Denver, July 3 Sec, Dr David A Strickler, 612 Empire Bldg, Denver

CONNECTICUT Regular New Haven, July 10 11 Sec, Dr Charles A Tuttle, 196 York St, New Haven

CONNECTICUT Eclectic New Haven, July 10 Chairman, Dr John W Fyfe, Saugatuck

CONNECTICUT Homeopathic New Haven, July 10 Sec., Dr Edwin C M Hall, 82 Grand Ave, New Haven

DELAWARE Dover and Wilmington, June 19 21 Sec, Dr H W Briggs, 1026 Jackson St, Wilmington

DISTRICT OF COLUMBIA Washington, July 10 Sec, Dr Edgar P Copeland, The Rockingham, Washington

FLORIDA, Regular Palatka, June 19 20 Sec, Dr E W Warren, Palatka

ILLINOIS Chicago, June 14 16 Sec, Dr C St Clair Drake, Springfield

INDIANA Indianapolis, July 10 12 Sec, Dr W T Gott, 84 State House, Indianapolis

KANSAS Topeka, June 19 21 Sec, Dr H A Dykes, Lebanon

KENTUCKY Louisville, June 19 21 Sec, Dr A T McCormack, Bowling Green

MAINE Augusta, July 5 6 Sec, Dr Frank W Searle, 776 Congress St, Portland

MARYLAND Baltimore, June 19 Sec, Dr J McP Scott, 137 W Washington St, Hagerstown

MASSACHUSETTS Boston July 10 12 Sec, Dr Walter P Bowers, Room 501, No 1 Beacon St Boston

MICHIGAN Ann Arbor June 12 14 Sec, Dr B D Harison, 504 Washington Arcade Detroit

MISSISSIPPI Jackson June 19 20 Sec, Dr W S Leathers, Oxford

MISSOURI St Louis June 18 Sec, Dr George M Jones, 206 Washington St, *Jefferson City*

NEW HAMPSHIRE Concord, June 25 26 Sec, Dr W T Crosby, Beacon Bldg, Manchester

NEW JERSEY Trenton, June 19 20 Sec Dr Alexander MacAlister, 438 East State St, Trenton

NEW MEXICO Santa Fe, July 9 Sec, Dr R K McClanahan, U S Naval Hospital, Las Animas, Colorado

NEW YORK Albany Buffalo New York and Syracuse, June 26 29 Sec Dr Willard J Denno Education Bldg, Albany

NORTH CAROLINA Raleigh, June 19 Sec, Dr H A *Royster*, 423 Fayetteville St Raleigh

NORTH DAKOTA Grand Forks, July 3 Sec, Dr George M Williamson, Grand Forks

OHIO Columbus, June 11 14 Sec, Dr George H Matson, State House, Columbus

OKLAHOMA Oklahoma City July 10 11 Sec, Dr R V *Smith*, Tulsa

PENNSYLVANIA Philadelphia and Pittsburgh, July 10 12 Sec, Mr Nathan C Schaeffer, State Capitol, Harrisburg

RHODE ISLAND Providence, July 5 Sec, Dr Gardner T Swarts, 315 State House Providence

SOUTH CAROLINA Columbia, June 12 Sec, Dr A Earle Boozer, 1806 Hampton St, Columbia

SOUTH DAKOTA Deadwood, July 10 Sec, Dr Park B Jenkins, Waubay

TENNESSEE Knoxville, Memphis and Nashville, June *15 16* Sec, Dr A B De Loach, Scimitar Bldg Memphis

TEXAS Austin, June 19 21 Sec, Dr M F Bettencourt Mart

VERMONT Burlington, July 10 12 Sec, Dr W Scott Nay, Underhill

VIRGINIA *Richmond, June 19 22* Sec, Dr J W Preston, 215 S Jefferson St, Roanoke

WASHINGTON Seattle, July 3 5 Sec, Dr C N Suttner, Walla Walla

WEST VIRGINIA Charleston, July 10 Sec, Dr S L Jepson, Capitol Bldg, Charleston

WISCONSIN Milwaukee, *June 26* Sec, Dr J M Dodd, 220 E 2nd St Ashland

WYOMING Laramie, June 27 29 Sec, Dr H E McCollum, Laramie

Medical School in Santo Domingo

An official document from the Republic of Santo Domingo describes the educational system in that republic It gives the courses and standards of the National University of Santo Domingo and its faculty of medicine For admission, a degree, either in letters and science or letters and philosophy, is required, together with a certificate showing that the candidate has passed an intensive examination in physics, chemistry, botany and zoology The medical course extends over seven years

Iowa February Examination

Dr G H Sumner, secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines, Feb 6-8, 1917 The total number of subjects examined in was 8, total number of questions asked, 100, percentage required to pass, 75 The total number of candidates examined was 6, all of whom passed Twelve candidates were licensed through reciprocity, March 15, 1917 The following colleges were represented

College	PASSED	Year Grad	Per Cent
Bennett Medical College		(1914)	82 9
Northwestern University		(1903)	81 2
Rush Medical College	(1911) 95,	(1916)	91
University of Pennsylvania		(1915)	87 2
Woman's Med College of Pennsylvania		(1891)	88 6

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
University of Colorado		(1913)	Colorado
Northwestern University	(1910)	(1914)	Illinois
Rush Medical College	(1893) Nebraska,	(1902)	Illinois
University of Illinois		(1911)	Illinois
University of Michigan Medical School		(1908)	Michigan
St Louis College of Physicians and Surgeons		(1889)	Missouri
John A. Creighton Medical College		(1914)	Nebraska
Jefferson Medical College of Philadelphia		(1903)	Penna
Universities of Nashville and Tennessee		(1911)	Georgia
Marquette University		(1914)	Wisconsin

Connecticut March Examination

Dr Charles A Tuttle, secretary of the Medical Examining Board of Connecticut, reports the written examination held at New Haven, March 13-14, 1917 The total number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass, 75 The total number of candidates examined was 23, of whom 18 passed, and 5 failed The following colleges were represented

College	PASSED	Year Grad	Per Cent
Yale University	(1914) 81 1,	(1915)	82 7
Georgetown University		(1915)	78 8
Johns Hopkins University	(1905) 86 4,	(1915) 78 2,	87 3
Cornell University	*	(1915)	84 4
Fordham University		(1916)	81 4
University and Bellevue Hosp Med Coll	(1914) 88 8,	(1916)	95
Jefferson Medical College of Philadelphia		(1916)	77 7
Medico Chirurgical College of Philadelphia		(1916)	84 5
University of Vermont	(1899) 76 7 (1913) 78 4, 85 5,	(1915)	79 4
		(1916)	82 6
Royal College of Physicians, Ireland		(1908)	75
	FAILED		
University of Maryland		(1916)	*
Harvard University		(1915)	72 3
University of Michigan Medical School		(1906)	69 4
Long Island College Hospital		(1916)	69 3
University of Vermont		(1910)	74 5

* Grade not given

Minnesota January Examination

Dr Thomas S McDavitt, secretary of the Minnesota State Board of Medical Examiners, reports the oral, practical and written examination held at Minneapolis, Jan 2-5, 1917 The total number of subjects examined in was 17, total number of questions asked, 80, percentage required to pass, 75 The total number of candidates examined was 6, all of whom passed Eleven candidates were licensed through reciprocity The following colleges were represented

College	PASSED	Year Grad	Per Cent
Northwestern University		(1915)	88
Rush Medical College		(1913)	91
University of Illinois		(1914)	80
Marquette University		(1916) 85,	86
University of Christiania		(1892)	76

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
George Washington University		(1916)	Dist Colum
Chicago College of Medicine and Surgery		(1908)	Illinois
Northwestern University		(1915)	Illinois
Rush Medical College		(1914)	Illinois
State Univ of Iowa Coll of Medicine		(1907)	Iowa
College of Phys and Surgs, Baltimore		(1906)	Ohio
John A Creighton University		(1911)	Illinois
University of Nebraska	(1908)	(1916)	Nebraska
Medical College of Virginia		(1905)	Virginia
Marquette University		(1916)	Wisconsin

Arkansas Homeopathic May Examination

Dr Scott C Runnels, secretary of the Homeopathic State Medical Board of Arkansas, reports that one candidate was granted a reregistration license at the written examination held at Little Rock, May 9, 1917, and one candidate was licensed through reciprocity

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
Chicago Homeopathic Medical College		(1899)	Wisconsin

Book Notices

Anatomical Names Especially the Basle Nomina Anatomica (B N A). By Albert Chauncey Eycleshymer, B.S., Ph.D., M.D., Head of the Department of Anatomy, University of Illinois. Assisted by Daniel Martin Schoemaker, B.S., M.D., Professor of Anatomy, St. Louis University. With Biographical Sketches by Roy Lee Moodie, A.B., Ph.D., Assistant Professor of Anatomy, University of Illinois. Cloth. Price $4.50 net. Pp. 744, with 28 illustrations. New York: William Wood & Co., 1917.

Anatomy, like many other branches of medical science, is in danger, according to the author, of being submerged by its own terminology. Over 50,000 names have been given to some 5,000 structures. The purpose of this volume is to present the B N A (Basle Nomina Anatomica) with a view to having the 5,000 names of this nomenclature made official for the structures mentioned and to discard the remaining 45,000 synonyms. The book is divided into three sections. First is a general discussion of anatomic names in which these names are classified according to the various systems of the body. This section includes a part on explanation of the nomenclature. The second section consists of a series of biographic sketches by Roy L. Moodie. It occupies approximately 175 pages and is of great interest and value. The biographic sketches are short, yet complete. Following each is the title of the particular anatomic work for which the author is particularly noted, and each sketch includes also a list of the anatomic structures with which the name of the author is connected. The third part of the book is an index of synonyms. It includes the 50,000 terms arranged in alphabetical order and thoroughly cross indexed. Certainly no anatomic laboratory or department is complete without this book.

The Essentials of Chemical Physiology for the Use of Students. By W. D. Halliburton, M.D., LL.D., F.R.S., Professor of Physiology in King's College, London. Ninth Edition. Cloth. Price $1.75. Pp. 324, with 72 illustrations. New York: Longmans, Green & Co., 1916.

The ninth edition of a student's textbook ordinarily calls for only a formal notice. This work has now reached nearly a quarter of a century of useful life. Published in 1893, its first edition contained much less practical work than the present edition, and yet it was at that time considered to present the maximum of the needs of a student of physiology for the highest degree in physiology or in medicine in the United Kingdom. Notwithstanding the present greatly expanded scope of the work, it now contains the minimum of what is considered essential for an ordinary degree. It may, therefore, be said to be an index of the progress of medical education in the English speaking countries during the last quarter of a century. It is interesting to compare the early and late editions in another respect, for it is remarkable what a large amount of the new and important methods have originated on this side of the Atlantic. As compared with its immediate predecessor, this edition is principally notable for the introduction of the urease method for estimating urea, and the Lewis-Benedict method for determining the sugar in blood. Other less important additions are the ninhydrin reaction, and the volumetric process for estimating sulphates.

Incompatibilities in Prescriptions. For Students in Pharmacy and Medicine and Practicing Pharmacists and Physicians. By Edsel A. Ruddiman, Ph.M., M.D., Professor of Pharmacy and Materia Medica, Department of Pharmacy, Vanderbilt University. Fourth Edition. Cloth. Price $2 net. Pp. 317. New York: John Wiley & Sons, 1917.

The drugs are arranged alphabetically, and the principal incompatibilities of each are indicated. Four hundred and fifty prescriptions are given which contain examples of the principal incompatibilities likely to be encountered. In most cases explanations of these are given on separate pages, although in some cases these have been omitted, the student being expected to recognize the incompatibility. Physicians who prescribe complex mixtures will be able to guard against incompatibilities by reference to this book. The general use of proprietary rather than scientific names for chemical substances is not for the best interest of scientific medicine in a book of this character.

Medicolegal

Presumption of Negligence from Burning of Patient

(Meyer et ux. vs. McNutt Hospital (Calif.), 159 Pac. R. 436)

The Supreme Court of California affirms a judgment for $750 damages in favor of the plaintiffs, husband and wife, for injuries caused, as alleged, by the carelessness of the defendant's employees in allowing Mrs. Meyer to be badly burned on the legs by a hot water bottle while she was unconscious from the effects of an anesthetic administered to her before a surgical operation was performed, although there was no direct evidence as to just when or how the injuries were caused. The court says that Mrs. Meyer testified that there were no burns or injuries of any sort on her legs when she entered the hospital or up to the time when she lost consciousness. When she regained her senses she suffered pain and complained to her nurse, who found blisters on the patient's legs. The injuries were treated as burns usually are and yielded to the treatment. The surgeon who performed the operation testified that she was not burned while in his presence, and the nurse who had charge of Mrs. Meyer before and after the operation said, in her direct testimony, that she put no hot water bag or anything of the sort in Mrs. Meyer's bed. But while there was no direct testimony to the effect that any servant of the defendant hospital had applied hot water bags or any other instrumentality to produce the injuries on Mrs. Meyer, the court thinks the jury was justified in determining from all of the circumstances that the burns were inflicted while the patient was unconscious and under the exclusive care of the defendant's nurses. The nature of the injuries themselves tended strongly to support this conclusion. Areas of 24 inches on one leg and 15 on the other were affected, and it seems hardly possible that one could be so burned while conscious without realizing it. Negligence, like almost any other fact, may be established by circumstantial evidence. It was clearly competent for the plaintiffs to prove by the cross examination of the surgeon that, in spite of the lack of necessity for hot applications, they were as matter of fact generally used; also to cross examine the nurse on the custom of the hospital with reference to warming beds. The doctrine of *res ipsa loquitur* (the matter speaks for itself) was properly applied to the facts of this case. The patient was unconscious. Under its contract with her the defendant corporation owed her a duty of protection which was violated by the use of an instrumentality which produced the painful results which were made manifest when she came out from under the influence of the anesthetic. Proof of the accident carried with it the presumption of negligence. And this is the rule whether the liability is ascribed to the carelessness of experienced nurses or to the defendant's negligence in selecting nurses who were not competent.

Competency of Trained Nurse to Testify that Treatment Was Proper

(Barsi vs. Simpson (Calif.), 161 Pac. R. 127)

The District Court of Appeal of California, First District, in affirming an order denying the plaintiff's motion for a new trial after a verdict was rendered in favor of the defendant, says that the sole claim of negligence against the defendant was that, having been employed to reduce a fracture of the plaintiff's left arm between the wrist and the elbow, he did not bring the ends of the fractured bones into position. A trained nurse, who was at the time the superintendent of the operating room of a large hospital, witnessed the performance of the operation on the plaintiff by the defendant, and testified that from her experience as a trained nurse she would say that the defendant's treatment of the injured arm was proper and not subject in any respect to adverse criticism. This court thinks that the question of whether or not the witness was qualified to testify as an expert was a matter within the sound discretion of the trial court, and, there being no showing of a clear abuse of that discretion, the ruling of the trial court will not be disturbed.

vary from 5 to 70 per cent, a discrepancy which suggests that the criteria of this condition are not clearly recognized or employed in diagnosis The available data bearing on the matter are statistical, clinical, anatomic and microscopic Statistics show that healed ulcers are common at necropsy, the chief age of incidence of ulcer is between 20 and 30 years, and of cancer between 50 and 60 years, ulcer is much more common in females, cancer is more frequent in males, and the common sites of ulcer and cancer are not identical Clinical observation shows that a history of ulcer long precedes cancer in the typical cases, that cancer has followed gastro-enterostomy for ulcer no more frequently than after resection of the ulcer, and that about 2 per cent of ulcers long treated medically develop cancer The anatomic appearance of undoubted cases of ulcerocarcinoma has usually been characteristic, the cancer beginning at one point of the ulcer and leaving the base free Microscopically, there are a moderate number of cases of chronic ulcer which show suspicious precancerous changes, but these may not safely be regarded as equivalent to cancer The great majority of chronic ulcers are free from such changes

Roentgen Ray in Peptic Ulcer

DR LEWIS G COLE, New York The small, early ulcer can be diagnosed with as great a degree of accuracy by serial roentgenography as a fracture of the long bones can be discovered by a roentgenogram The Roentgen ray detects all kinds and stages of ulcer

Medical Treatment of Peptic Ulcer

DR. LUDWIG KAST, New York It is necessary to be clear as to which patients should be treated medically and which should not "Surgical with delay" are (1) cases of perforated ulcers, and (2) repeated serious hemorrhages "Surgical as soon as feasible" are (1) chronic ulcers, needing preparatory, rigid medical treatment, (2) indurated ulcers, (3) penetrating ulcers and hour-glass contractions, and (4) cases offering suspicion of malignancy "Borderline cases" (1) with no facilities for medical treatment, (2) neurasthenic cases, particularly those dependent on anodynes The condition in all surgical cases is improved by previous medical preparation Medical treatment is directed chiefly toward reducing gastric secretion and neutralizing hydrochloric acid as much as possible Some points in the treatment are covering and protecting the ulcerated surface by use of bismuth, giving of acid-binding foods, giving of alkalies, checking of gastric secretion, by proper arrangement of diet, avoidance of foods that stimulate gastric secretion If after several weeks of medical treatment the patient is still dependent on a restricted diet, surgical treatment should be resorted to

Surgical Treatment of Peptic Ulcer

DR JOHN B DEAVER, Philadelphia Under peptic ulcer I include gastric, duodenal, marginal and jejunal ulcer While jejunal ulcer is more commonly encountered as a sequel to gastro-enterostomy, it can occur only as a distinct pathologic entity Gastric and duodenal ulcers comprise two varieties, perforative and nonperforative The surgeon and the bacteriologist have done a great deal in the treatment of peptic ulcer The best safeguard against carcinomatous degeneration is excision of the ulcer Gastro-enterostomy should be advised when obstruction is present Even then it is not so efficacious as pylorectomy The so-called internist should be called externist, as he never goes into the abdomen until the postmortem, and then he has some one else to do it for him

DISCUSSION ON PEPTIC ULCER

DR FENTON B TURCK, New York Most surgeons are agreed that gastric ulcer is of bacterial origin I have found that bacteria penetrate the intestinal wall and pass into the pyloric region I have produced thirty-six cases of ulcer experimentally Injecting the bacteria from the teeth and tonsils into the blood does not cause infection, it is an autolysis, not an infection In my experiments I have fed the animal with beef and fatty acids and as a result caused migration of bacteria into the intestinal walls They pass into the submucosa and increase ferments in the pylorus and cause autolysis As to the treatment of these cases, the surgeon knows because he sees the conditions We do not need to theorize from the outside There is no recurrence after suture of the perforation because immunity is produced by the intestinal flora and an autovaccination takes place

DR. WILLIAM SKINNER, Geneva There are many diagnostic points for gastric ulcer One is discoverable by tactile sense A slight palpation discloses a peculiar kind of rigidity over the location of the ulcer In regard to the treatment of gastric ulcers by posterior gastrojejunostomy, I have had an interesting case in which there was a history of ulcer for twenty-one years A gastrojejunostomy was done with relief of symptoms for six years, then there was a severe hemorrhage, and a pylorectomy was done The ulcer had been eating out on one side and healing on the other After the pylorectomy the patient was well two years, and then had another hemorrhage. An ulcer was found on the anterior wall of the stomach, which was excised, and sutured from the inside and the gastrojejunostomy enlarged The man has recovered and is well

DR. S I HIRSCH, New York There is no unanimity of opinion that every ulcer should be excised Surgeons want to know whether it is early carcinoma or not Consequently the question of diagnosis is extremely difficult The Roentgen ray has done far more than stomach tubes or string tests Erosion does not change the stomach sufficiently, and functional changes must be considered in ulcer cases

Complete Avulsion of Scalp

DR F H FLAHERTY, Syracuse I have observed five cases A woman, working in a laundry, had her hair caught in a revolving shaft The scalp was completely torn from the skull She was alone at the time of the accident, and was obliged to walk 12 feet to stop the motor She remained quite conscious and suffered little shock The scalp was covered with Tiersch grafts Only autodermic grafts should be used, Tiersch grafts from the thigh being preferable It is absolutely impossible to replace the scalp, which shrinks into hard, dry skin, and becomes infected Grafts should be placed on freshly denuded surfaces as soon as possible If an antiseptic is desired, 50 per cent alcohol solution is good, if a protective, sterile petrolatum The same region of the body could provide grafts every six weeks if necessary

Acute Hemorrhagic Pancreatitis

DR WILLIAM LINDER, Brooklyn In three years I have observed thirty-three cases It is important to think of the possibility of acute hemorrhagic pancreatitis when there is an acute abdominal condition It is not necessarily a fatal disease, there are more cases of the mild type than of the fulminating type If recognized early, they do not become serious Early diagnosis is absolutely necessary to secure good results The pancreas must be punctured with blunt forceps to drain the very toxic material Often a cholecystostomy or a cholecystectomy is necessary as well In one third of my cases I found associated gallbladder disease

DISCUSSION

DR JOHNSON, Batavia There has been a tendency recently to make the diagnosis of acute pancreatitis frequently The disease is often something else instead Men nowadays make the diagnosis as a habit I had one case in which there was a great bulging on the costovertebral angle on the left side, when the abdomen was opened, sloughs of the pancreas came out It was an acute pancreatitis, followed by a cyst

DR PARKER SYMS, New York I had a case which was not diagnosed until after death It was associated with other complications The man presented signs of obstruction such as distention The cause of the disease was not surmised A rightsided section was done and a torsion of the omentum found This, a surgical entity, occurred only with adhesions of the omentum from an old hernia on the right side Pancreatitis was undoubtedly the underlying cause of the torsion There was at that point a great discrepancy between the veins and the arteries, and when the hernia was fixed, adhesions to the omentum occurred and involved the coils of the intestime At operation the gangrenous part of the omentum was ablated and the man was immediately but only temporarily relieved Signs of obstruction continued and a cholecystostomy was done without avail The condition was not recognized until necropsy There was no evidence of fatty necrosis

Nephropexy

Dr Samuel Lloyd New York Floating kidney is a clinical entity It often exists without symptoms of any kind Kidneys are movable in the first second or third degrees the latter being a distinctly floating kidney remaining out of place even when the patient is recumbent In this class marked symptoms might be noted Patients often are treated for years by gastro enterologists without knowing that the trouble is nephritic in origin Symptoms are not distinctly referable to the kidney, such symptoms as nervousness heart disturbance dyspnea emaciation gastric disturbances and constipation are often marked There might be perinephritis and toxemia Many of these symptoms are due to chronic parenchymatous nephritis owing to changes in the circulation of the organ As regards fixation of the kidney there need be no recurrence if proper technic is observed The kidney must be firmly attached to the lumbar fascia and as the kidney is posterior to the peritoneum no intra abdominal pressure is sufficient to keep it in place The kidney should be anchored to the lumbar fascia, close to the muscles and with a freshened surface close to the separated muscles themselves

DISCUSSION

Dr James Vander Veer Albany There is one thing even better than keeping the patient in bed and that is to raise the foot of the bed 12 inches and give the hepatic flexure a chance to get back I do not like to operate on a movable kidney without Roentgen diagnosis

Dr Albert Vander Veer, Albany In cases that have come under my observation decided relief has been given by operation

Cancer of the Bladder

Dr James A Gardner, New York This is an especially discouraging condition its only hope lying in early diagnosis Half the tumors are malignant many tumors becoming so after being benign for years Blood in the urine should be investigated at once and cystoscopy performed as bleeding at first is more or less intermittent Blood in the urine and much epithelium is suggestive of bladder tumor Pain often does not occur till later when large clots occasion difficulty in voiding Cystoscopy is also absolutely necessary for early diagnosis and if benign papillomas are found fulguration should be tried If there is suspicion of malignancy, operation must be done Mortality is lower, recurrence much less and freedom from recurrence much greater when partial resection of the bladder is performed A wide resection of the bladder wall offers the best method of treatment in carcinoma of the bladder It is important to locate the ureters in an operation. An extraperitoneal operation is the one of choice. The integrity of the bladder should be preserved as much as possible The surface of the growth should be smeared with the actual cautery If there is involvement of the ureter it is tied off and transplanted to the point at which there is least tension. If the neck of the bladder is involved, a total resection is necessary The ureters are then transplanted into the bowel

DISCUSSION

Dr. James Vander Veer, Albany Cancer of the bladder should be discussed among laity and physicians to bring patients for cystoscopy early enough Even well educated physicians give their patients hemostatics or styptics and tell them to come back later, if there is recurrence, and many patients do not come for a year One such patient had to have transplantation of the whole side of the bladder The first time bleeding is seen the patient should be examined cystoscopically In localized operations of the bladder, we can bring the patient out alive with early treatment, but when the patient is riddled with cancer and general carcinomatosis has set in, it is hopeless

Sarcoma, Complicating Primary Paget's Disease of the Bone

Dr Ezra Hazlett, Auburn A man aged 40, in 1913 first had pain and weakness in the feet He wore arches without benefit There was swelling of the tibia, and walking was painful He was treated for rheumatism He appeared prematurely old He was well nourished but anemic, he walked with a limp His movements were stiff and awkward He had a tender swelling over the midspine of the tibia The Roentgen diagnosis was syphilitic osteitis The blood Wassermann test was negative He was treated with salvarsan without benefit In September 1915 tumor tissue was removed for examination and a diagnosis of giant cell sarcoma was made Roentgenoscopy of the rest of the skeleton revealed the true nature of the primary bone condition Lesions of osteitis deformans were found in the skull long bones hands and feet In January 1916 the patient had an operation for removal of tumor In June 1916 he had a pathologic fracture of one femur This got slowly better and in November 1916 he had a pathologic fracture of the other femur Later there were fractures in the right radius and humerus Death occurred in February, 1917 No necropsy was held

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Anatomy, Philadelphia

May XXI No 3

1 Studies on Hemal Nodes in Bovines and Goats. A W Meyer, San Francisco —p 359
2 Id A W Meyer San Francisco —p 375
3 Position of Respiratory Vascular Net in Allantois of Chick V Danchakoff New York —p 407
4 Study of Reaction of Lymphatic Endothelium and of Leukocytes, in Tadpole s Tail Toward Injected Fat E R Clark and E I Clark Columbia Mo
5 Blood Vessels of Heart Valves S Bayne Jones Baltimore —p 449
6 Chondriosomes in Cells of Fish Embryos J Duesberg Baltimore —p 465

5 **Blood Vessels of Heart Valves**—Bayne-Jones summarized his studies as follows 1 By the injection of carmin gelatin under pressure of 160 to 190 mm Hg into the coronary arteries blood vessels are demonstrable in the valves of the normal human heart 2 The atrioventricular valves receive distinct branches from the annular divisions of the coronary arteries These vessels pass into the valves at the thickened regions above the insertion of the chordae *tendineae* and ramify chiefly along the line of closure of the valves Arteries veins and an anastomosing capillary bed are recognizable in these locations 3 The chordae tendineae receive a few arterioles from the vessels of the papillary muscles These traverse chordae tendineae chiefly beneath the endothelium covering these structures 4 The semilunar valves receive a definite blood supply from the vasa vasorum of the pulmonary artery and aorta and from the endocardial vessels of the auricles 5 These vessels afford a definite anatomic basis for the conception that endocarditis may be embolic in its origin

American Journal of Physiology, Baltimore

May, XLIII No 2

7 Excitation of Microscopic Areas Nonpolarizable Capillary Electrode F H Pratt, Buffalo —p. 159
8 *Accuracy of Movement in Absence of Excitation from Moving Organ K. S Lashley, Baltimore —p 169
9 Cardioskeletal Quotient. W L. Mendenhall, Hanover, N H —p 195
10 *Physiology of Stomach Alleged Influence of Removal of Salivary Glands on Secretion of Gastric Juice. A M Swanson, Chicago —p 205
11 Composition of Saliva in Relation to Incidence of Dental Caries J A Marshall, San Francisco —p *212*
12 *Epinephric Content of Blood in Conditions of Low Blood Pressure and Shock E A Bedford New York —p 235
13 Bile Pigment Metabolism Bile Pigment Output Influenced by Hemoglobin Injections Anemia and Blood Regeneration G H Whipple and C W Hooper, San Francisco —p 258

14 Id Bile Pigment Output Influenced by Hemoglobin Injection, Splenectomy and Anemia C W Hooper and G H Whipple, San Francisco—p 275
15 Id Bile Pigment Output Influenced by Hemoglobin Injection in *Combined Eck Bile Fistula Dog* C W Hooper and G H Whipple, San Francisco—p 290
16 *Effects of Epinephrin on Distribution of Blood Volume Changes and Venous Discharge in Spleen R G Hoskins and R E L Gunning, Chicago—p 298
17 *Id Volume Changes and Venous Discharge in Kidney R G Hoskins and R E L Gunning, Chicago—p 304
18 *Differential Action of Epinephrin I A Hartman and L McPhedran, *Toronto*, Canada—p 311
19 Hydrolytic Study of Chitin S Morguns—p 328
20 Fate of Sucrose Parenterally Administered S Kuriyama, New Haven, Conn—p 343
21 *Perfusion of Mammalian Medulla, Effect of Carbon Dioxid and Other Substances on Respiratory and Cardiovascular Centers D R Hooker, D W Wilson and H Connett, Baltimore—p 351

8 **Accuracy of Movement in Anesthetic Limb**—Active movements of the left knee were studied by Lashley in a subject having a complete anesthesia to movements of this joint Evidence bearing on the nature of the control of movement in such a condition suggests the following conclusions Accurate movement of a single joint is possible in the absence of all excitation from the moving organs The interaction of the various muscles concerned in the movement is not obviously different from that found in normal subjects In contrast to reflexly controlled movements, the accuracy of movements under such conditions is in direct ratio to their rate, that is, within the limit tested, the quicker the movement the more accurate it is made The control of accuracy of the movements is relatively independent of their duration, movements of different length do not result from a uniform excitation continued for varying time intervals but from variations in the intensity of motor discharge Lashley suggests that it is probable that a control of the intensity of motor discharge after its initiation is possible in the absence of excitation from the organs activated The normal phenomena of fatigue occur when it is highly probable that the chemical sensitivity of the fatigue muscles is reduced

10 **Removal of Salivary Glands and Gastric Secretion**—Swanson's results contradict the theory of a hormone in the salivary glands stimulating the secretion of gastric juice Extirpation of the salivary glands in the dog does not decrease the gastric juice secretion (appetite and secretagogue juice) Extirpation of the salivary glands causes a distinct rise in the acidity of the gastric juice This increase in acidity is greater than can be accounted for by the slight increase in the rate of secretion The slight increase in quantity may be due to the absence of the alkaline saliva After extirpation of the salivary glands, the maximum secretion rate after a meal appears slightly retarded This may be due to the absence of the water of the saliva, and to decreased psychic secretion, owing to the dryness of the mouth and consequent impaired taste

12 **Epinephric Content of Blood in Shock**—According to Bedford increased quantities of epinephrin are thrown into the blood during conditions of low blood pressure and shock This increased amount of epinephrin found in the blood is accompanied by a hyperactivity of the suprarenal gland and is not simply the result of the release of epinephric material stored in the gland The epinephric content of the blood increases only after a somewhat prolonged continuation of the conditions leading to shock The quantity of epinephric material in the blood increases with the prolongation of the period of low blood pressure and shock. Bedford suggests that this increased output of epinephrin into the blood may be a last effort on the part of the organism to resist the forces that are tending toward a fatal degree of low blood pressure

16 **Effects of Epinephrin in Spleen**—Epinephrin in all effective dosages whether injected instantaneously or infused Hoskins and Gunning found, causes in the spleen a brief dilatation followed by a contraction Occasionally the contraction is followed by a secondary dilatation after the administration of the epinephrin is discontinued Aside from the brief preliminary effect in no case was a pure (primary) dilatation observed The threshhold for splenic contraction is lower than for changes in arterial pressure Occasionally a quiescent spleen is stimulated by epinephrin to rhythmic contractions Epinephrin causes a brief *increase*, then a decrease in the outflow from the splenic veins

17 **Effects of Epinephrin in Kidney**—Epinephrin in both depressor and pressor doses ordinarily causes contraction of the kidneys of dogs and a corresponding decrease in the venous outflow Instantaneous injections and slower infusions of epinephrin give qualitatively similar results One animal gave renodilatation with smaller and renoconstrictions with larger doses The threshhold for renal changes and blood pressure changes is about the same The observations reported on by Hoskins and Gunning as a whole do not support but also do not definitely disprove the theory that in normal animals epinephrin diuresis is due to renal dilatation

18 **Differential Action of Epinephrin**—Hartman and McPhedran claim that small doses of epinephrin cause constriction of the vessels of *intestine*, of kidney, and generally also of spleen The minimal dose necessary to produce this constriction is in much the same order of magnitude as that required to cause a fall in blood pressure, but it is not necessarily identical with it, nor is it the same for every organ in the same animal Increase of the dose of epinephrin causes in all cases marked dilatation of the intestine This dilatation is brought about by doses materially less than those which are necessary to cause a rise in general blood pressure. This dilatation in the intestine is under control of the central nervous system, and is done away with by severing connection with the central nervous system Epinephrin in the majority of cases has in all doses a constrictor effect on the spleen, in some, minute doses cause first dilatation, which is the initial change of a series of rhythmical splenic waves

21 **Effect of Carbon Dioxid on Respiratory Center**—The experiments outlined by the authors appear to prove conclusively that blood with a comparatively high tension of carbon dioxid causes a greater stimulation of the respiratory center than does blood with a lower tension of carbon dioxid but with the same hydrogen ion concentration

Archives of Internal Medicine, Chicago

May, XIX Part 1 No 5

22 *An Experimental Test of Relation of Sewage Disposal to Spread of Pellagra J F Siler, P E Garrison and W J MacNeal, New York—p 683
23 *Intestinal Eosinophilia, Report of Case G D Barnett, San Francisco—p 695
24 *Significance of Embryonal Fat Cells in Certain Pathologic Conditions D Symmers and A Fraser, New York—p 699
25 *Experimental Appendicitis J W McMeans New York—p 709
26 *Transient Heart Block—Electrocardiographic Studies E B Krumbhaar, Philadelphia—p 750
27 *Carbon Dioxid Content of Blood and of Alveolar Air in Obstructed Expiration E D Friedman and H C Jackson, New York—p 767
28 Study of Blood Sugar Comparison of Tolerance for Glucose in Diabetic and Normal Subjects R Cummings and G Piness Los Angeles—p 777
29 Human and Animal Liver After Alcohol F A McJunkin, Milwaukee—p 786
30 Influence of Radiations from Kromayer's Mercury Quartz Lamp on Cerebral Cortex H Wago, Tokio, Japan—p 801
31 Reflex Action of Volatile Irritants on Circulation C C Lieb and W W Herrick, New York—p 811

22 **Relation of Sewage Disposal to Spread of Pellagra**—The relationship of improper sewage disposal to pellagra was investigated by the authors in a pellagrous community, Spartan Mills S C As a result of this study the installation of sanitary systems of sewage disposal is recommended as a measure for the restriction of the spread of pellagra in the general population Subsequent to the installation of a water carriage system of sewage disposal at *Spartan Mills* the community has been transformed from a *pellagra focus* to a community in which pellagra no longer spreads Old cases of pellagra have continued *to* recur in this community, although a distinct decrease *in them* has occurred in the third year after the installation of the sewers

23 **Intestinal Eosinophilia**—In the case reported by Barne the patient had had occasional attacks of diarrhea alternating with constipation for a few months During the attack of diarrhea the bowels moved five or six times a day, and he

frequently noticed masses of mucus in the stool and at times blood The man had an eosinophilia of 47 per cent A stool following castor oil contained much mucus and red blood Microscopically a very few ova of trichuris trichiura were found after extensive search with special methods The proctoscope inserted 23 cm showed the mucous membrane of the rectum everywhere covered with glairy mucus pus and bright red blood No areas of ulceration were seen Smears of the pus showed a large percentage of eosinophils No Charcot-Leyden crystals were seen A small bit of necrotic tissue found in the stools was sectioned and showed a chronic inflammation with large numbers of eosinophils in the mucosa and submucosa

24 **Embryonal Fat Cells**—There is a condition in marantic infants attended by such extensive hyperplasia of the so called primitive fat organs as to resemble a new growth The body of a 3 months old infant was examined postmortem by Symmers The fat bodies are cherry red in color and are composed of embryonal fat cells and a complex system of intercommunicating capillaries The bodies may be found wherever fat tissues normally exist but are particularly numerous in the connective tissue planes of the neck and chest and around the suprarenals and kidneys Symmers and Fraser claim that the glandula insularis cervicalis of Pende recently described as a new member of the endocrine series is identical in structure and function with the embryonal fat organs The authors also report a case of Whipple's disease a disease of the fat absorption apparatus characterized histologically by neutral fats and fatty acids in the lymph spaces of the intestine mesentery and mesenteric lymph nodes the tissues showing in addition extensive hyperplasia of embryonal fat cells and the presence of foreign body giant cells The histology is indicative of a chronic productive inflammatory process attended by such extensive hyperplasia of embryonal fat cells as to suggest transformation into a sarcoma (embryonal cell liposarcoma malignant lipoblastoma)

25 **Experimental Appendicitis**—The effects of the intravenous injection of micro-organisms derived from several sources were studied by McMeans Material was obtained from appendixes from the tonsils of patients having appendicitis from tonsils and adenoid tissue removed in the children's clinic from tonsils of fracture patients otherwise apparently healthy and from pus of an infected hand In 125 rabbits injected intravenously with a variety of organisms gross hemorrhages were noted in the appendix sixty-two times The frequency with which hemorrhage and bacterial emboli are observed without the presence of an inflammatory reaction suggests that a mechanical factor must be considered as well as the direct action of the organisms and their toxins The thymus lymph glands of the mesentery, of the inguinal region, glands about the head of the cecum and also Peyer's patches were commonly affected in conjunction with hemorrhages distributed variously throughout the organs of the body The fact that a variety of different organisms have been associated with changes in rabbits' appendixes tends to indicate that a special organism has not yet been found The production of appendicitis in animals by the intravenous injection of large doses of vigorous bacteria cannot be considered as an indication that these organisms attack the human appendix by way of the blood McMeans protests against the idea that any organism possesses a peculiar affinity for any given organ when the same organism shows a capacity for the invasion of other organs in a very appreciable proportion of experiments As the result of a study of the literature and experimental work, McMeans finds little evidence to support the belief that appendicitis in the human subject is ordinarily caused by a blood infection

26 **Transient Heart Block**—Four different types of transient heart block are described analyzed and discussed by Krumbhaar (*a*) transient partial A-V block of myocardial origin, occurring during an exacerbation of acute rheumatic carditis, varying with the degree of arthritis, yet responding to atropin, (*b*) transient complete A-V block, brought on by digitalis and temporarily reducible by atropin to a 2 1 rhythm, (*c*) the development of defective conductivity in the right branch of His' bundle in an old man suffering with arteriosclerosis chronic myocarditis and anginoid symptoms, (*d*) transient periods of prolongation of the P-R interval (to more than 0 3 second) without adequate cause in a healthy young adult male He is also subject to paroxysmal tachycardia of auricular (or sinus) origin which occurs independently of and does not affect the state of the conductive system

27 **Carbon Dioxid of Blood**—The high carbon dioxid content of the alveolar air in asthma and obstructed expiration in general Friedman and Jackson believe is due to a circulatory cause The rise in intrabronchial pressure during the long expiration interferes with the free flow of blood through the pulmonary capillaries and causes a damming back of the blood on the venous side There is a consequent accumulation of carbon dioxid in the blood with the liberation of carbon dioxid into the alveolar air chiefly during the short inspiratory phase of asthmatic breathing

Bulletin of Medical and Chirurgical Faculty of Maryland

May IX No 11

32 Physician's Duty in Present Crisis C W Mitchell, Baltimore —p 161
33 Osler Testimonial Fund H B Jacobs Baltimore —p 168

California State Journal of Medicine, San Francisco

May XVII No 5

34 Some Epidemiologic and Bacteriologic Observations on Paradysentery Infections in California K F Meyer and J F Stickel San Francisco —p 139
35 Sanitary Service of War and Demobilization Period R G de Voe —p 146
36 Is Acute Anterior Poliomyelitis Spread by Direct Personal Contact? J C Geiger Berkeley —p 150
37 Fallacies of Lost Vaccination Tetanus Due to Vaccine Virus J C Geiger Berkeley —p 152
38 Death Due to Status Lymphaticus Following Injection of Diphtheria Antitoxin W C Hassler San Francisco —p 153
39 Typhus in California J G Cumming —p 154
40 Intestinal Infection in Sacramento Valley J F Gundrum and N C Hale Sacramento —p 157
41 Three Cases of Beriberi A C Reed San Francisco —p 158
42 Prevention of Quarantinable Diseases on Border and at Ports of Embarkation W C Billings Angel Island —p 160
43 Acute Poliomyelitis with Special Reference to Myoclonus B Oettinger Long Beach —p 168

Cleveland Medical Journal

April XVIII No 4

44 Clinical Classification of Chronic Nephritis H A Christian Boston —p 223
45 Antrum Surgery S M Weaver, Cleveland —p 232
46 Fracture of Spine without Cord Involvement W C Stern, Cleveland —p 251
47 Cleveland's Role in Medical War Relief R F Stone, Cleveland —p 259

Journal of Cancer Research, Baltimore

April IV No 2

48 *Effects of Radium on Tissue Growth in Vitro F Prime New York —p 107
49 *Epithelioma Developing in Pellagrous Dermatitis K M Lynch Charleston S C —p 131
50 *Tissue Growth and Tumor Growth L Loeb St Louis —p 135
51 *Significance of Lymphocyte in Immunity to Cancer M J Sittenfield New York —p 151
52 Influence of Various Factors in Nutrition on Growth of Experimental Tumors S R Benedict and A H Rahe, New York —p 159
53 *Alkalinity of Blood in Malignancy and Other Pathologic Conditions Together with Observations on Relation of Alkalinity of Blood to Barometric Pressure M L Menten St Louis —p 179
54 Inheritance Behavior of Infections Common to Mice Studies in Incidence and Inheritability of Spontaneous Tumors in Mice M Slye Chicago —p 213
55 Effects of Nervous System on Growth and Development of Tumors I Adler and M J Sittenfield New York —p 239
56 Tumor Immunity in Chick Embryo H N Stevenson, New York —p 245

48 **Effects of Radium on Tissue Growth**—Prime found that radium in sufficiently large doses will so injure the nucleus of the cell as to prevent further mitosis This injury to the mitotic power of the cell does not, however, prevent a marked increase in the area of the culture due to an outwandering of cells This power of the radiumized cells to wander out from the main tissue is limited, extending through two or

at most three generations When there is a marked outwandering of cells after radiumization, but no mitosis, the tissue will not grow when inoculated into mice Radium does not, therefore, kill the cells outright, as is shown by the persistence of beating in heart muscle cells, but injures the nucleus in such a manner as to prevent further division which must eventually result in the death of the cell, if its energy is expended in growth and division and not in a purely mechanical function The well known high resistance to radium of the cells of the central nervous system, which do not divide in adult life, is presumably correlated with the survival of the heart muscle cells after lethal exposures The stimulating effects of minimal doses of radium are shown by the profuse outwandering of the cells which occurs after sublethal exposures

49 **Epithelioma Developing in Pellagrous Dermatitis**—So far as such an application can be made, Lynch's observation of epithelioma formation in pellagrous dermatitis seems to draw the skin lesions resulting from the action of the Roentgen light, from sun-burn, including the malignant degeneration of the skin in xeroderma pigmentosum, and from pellagra closer together, and to lend support to the belief that the action of light is concerned in the development of the dermatitis in pellagra

50 **Tissue Growth and Tumor Growth**—Loeb suggests that the majority, and ultimately perhaps all, of the phenomena observed in tumor growth find a parallel in the growth of normal tissues under special conditions

51 **Significance of Lymphocyte in Immunity to Cancer**—A high degree of lymphocytosis, caused either by subcutaneous injections of pilocarpin or by the intravenous introduction of leukocytic cream from rats that had received stimulating doses of Roentgen ray, Sittenfield says, affords neither a protective nor a defensive mechanism against tumor inoculation Naturally immune rats, which had had their immunity tested by three or four inoculations of Flexner-Jobling rat carcinoma and were then subjected to repeated doses of Roentgen ray, causing in them a very low lymphoid count in the blood, remained refractory to further inoculation of the Flexner-Jobling tumor Neither increase nor reduction of the lymphoid elements in the blood had any influence on either resistance or susceptibility to tumor growth

53 **Alkalinity of Blood in Malignancy**—The general result of Menten's study is that in nearly all the cases of cancer or sarcoma examined, there is to be found an alkalinity of the serum greater than that of the serum of normal individuals Of the seventy cases examined by Menten only three or four were found which had an alkalinity of the normal amount or less than normal In all other cases there was some excess of alkalinity and in some of the cancers of the internal organs this was very marked In one case in which bicarbonate was given there was also a very marked increase in rate of growth of the cancer This rise of alkalinity in the blood, while generally occurring in cancer, is not specific for cancer It was observed in several other conditions On the other hand, in certain heart lesions with dyspnea and various other nonmalignant diseases, the alkalinity is reduced below the normal In diabetes mellitus, in the state before acidosis, there is an abnormally high alkalinity High alkalinity is not, therefore, a certain indication of cancer, but its presence in suspected cancer is an added reason for a positive diagnosis The examination of the alkalinity of the serum may, therefore, be of considerable practical assistance in the diagnosis of this disease

Journal of Laboratory and Clinical Medicine, St. Louis

May II, No 8

57 *Cases of Unusual Aneurysms P G Woolley, Cincinnati—p 525
58 Toxicity of Heterologous and Homologous Serums C E Roser, Ann Arbor, Mich—p 536
59 *Chemistry of Pernicious Anemia T L Squier, Ann Arbor, Mich—p 552
60 Two Cases of Fatal Heroin Poisoning W D McNally, Chicago—p 570
61 Animal Inoculations Supplementary to Introductory Course in Pathogenic Bacteriology W H Manwaring and J T Connell, Stanford University, Calif—p 573
62 Technic with Fridericia Apparatus M J Breuer, Lincoln, Neb—p 575
63 Cyanid Poisoning in Case of Typhoid L Hektoen, W S Haines Chicago, and V C Vaughan, Ann Arbor, Mich—p 576
64 *Improved Test for Indican in Urine F C Askenstedt, Louisville Ky—p 578
65 Diagnosis of Malignant Tumors by Paraffin Sections of Centrifuged Exudates F S Mandlebaum, New York—p 580

57 **Cases of Unusual Aneurysms**—Woolley cites cases of aneurysm occurring in the innominate artery, the superior mesenteric artery In connection with the almost completely calcified splenic artery Aneurysm associated with a congenital cardiac septal defect in a young infant

59 **Chemistry of Pernicious Anemia**—Squier states that pernicious anemia may be considered the result of a gastro-intestinal disturbance leading to destruction of mucosa sufficient either to allow undigested proteins to leak through into the blood stream where their parenteral digestion liberates protein poisons, or to the absorption of known hemolytic toxins produced in the course of intestinal putrefaction such as, that is, p-oxyphenylethylamin In either case the poison has a destructive influence on the intestinal mucosa, as well as the more evident hemolytic effect, and this results in the establishment of a vicious circle Splenectomy lessens the severity of the disease by increasing the resistance of the reds to hemolytic agents When the hemolymph glands and accessory spleens take on the splenic function a relapse occurs By injections of hemolysins, such as saponin, experimental anemias can be produced in animals that are apparently identical both in the blood picture and course with true idiopathic pernicious anemia

64 **Improved Test for Indican in Urine**—The qualitative test for indican described by Askenstedt is a simplified procedure of his quantitative test published in 1912, and is offered to those practitioners who can not afford the twelve minutes necessary for a quantitative determination Dilute the urine until it has a specific gravity of 1 005 For example if urine shows a specific gravity of 1 017, dilute five parts of urine with twelve parts of water, if its specific gravity is 1 021, dilute five parts of the urine with sixteen parts of water etc, corrections being made for temperature An exception is made for diabetic urine, which is diluted until its urea content is 0 5 per cent Place 10 c c of the diluted urine in a test tube and warm over a flame until the lower end of the tube begins to feel hot to the hand Then add 8 c c chloroform and mix by shaking a few times Ten cubic centimeters of a solution of 0 4 per cent perchlorid of iron in concentrated hydrochloric acid (Obermeyer's reagent) is now added and, with the tube duly stoppered, quickly extract the indigo by shaking the tube two minutes, holding it in a horizontal position By releasing the stopper once or twice during the procedure, squirting will be prevented After this, let the chloroform fall to the bottom of the tube, then pour off most of the supernatant fluid, fill the tube nearly full with water invert it a few times to wash the chloroform and let it again precipitate in the tube If indican is normal in amount, the chloroform will remain white or show a mere trace of blue Any increase in blue exhibits a proportionate excess of indican The reading should be made as soon as the chloroform is precipitated, for on standing the chloroform slowly becomes transparent, with an increase in the shade of blue when present

Journal of Nervous and Mental Disease, Lancaster, Pa

May XLI No 5

66 *Comparative Study of Cases Showing Thalamic Lesions at Necropsy A B Evarts, Washington, D C—p 385
67 Spinal Type and Family Form of Progressive Muscular Atrophy as Appearing in Adults G W Robinson, Kansas City Mo—p 401
68 Variations in Sensory Threshold for Faradic Stimulation in Psychopathic Subjects G P Grabfield Boston—p 410
69 *Case of Anomalous Torsion Spasm F X Dercum Philadelphia—p 420
70 *Make Up of Atypical Cases of Manic Depressive Insanity S N Clark Kankakee, Ill—p 424

66 **Cases Showing Thalamic Lesions at Necropsy**—Among the last thousand necropsies held at the Government Hos

at most three generations When there is a marked outwandering of cells after radiumization, but no mitosis, the tissue will not grow when inoculated into mice Radium does not, therefore, kill the cells outright, as is shown by the persistence of beating in heart muscle cells, but injures the nucleus in such a manner as to prevent further division, which must eventually result in the death of the cell, if its energy is expended in growth and division and not in a purely mechanical function The well known high resistance to radium of the cells of the central nervous system, which do not divide in adult life, is presumably correlated with the survival of the heart muscle cells after lethal exposures The stimulating effects of minimal doses of radium are shown by the profuse outwandering of the cells which occurs after sublethal exposures

49 **Epithelioma Developing in Pellagrous Dermatitis**—So far as such an application can be made, Lynch's observation of *epithelioma formation in pellagrous dermatitis* seems to draw the skin lesions resulting from the action of the Roentgen light, from sun-burn, including the malignant degeneration of the skin in xeroderma pigmentosum, and from pellagra closer together, and to lend support to the belief that the action of light is concerned in the development of the dermatitis in pellagra

50 **Tissue Growth and Tumor Growth**—Loeb suggests that the majority, and ultimately perhaps all, of the phenomena observed in tumor growth find a parallel in the growth of normal tissues under special conditions

51 **Significance of Lymphocyte in Immunity to Cancer**—A high degree of lymphocytosis, caused either by subcutaneous injections of pilocarpin or by the intravenous introduction of leukocytic cream from rats that had received stimulating doses of Roentgen ray, Sittenfield says, affords neither a protective nor a defensive mechanism against tumor inoculation Naturally immune rats, which had had their immunity tested by three or four inoculations of Flexner-Jobling rat carcinoma and were then subjected to repeated doses of Roentgen ray, causing in them a very low lymphoid count in the blood, remained refractory to further inoculation of the Flexner-Jobling tumor Neither increase nor reduction of the lymphoid elements in the blood had any influence on either resistance or susceptibility to tumor growth

53 *Alkalinity of Blood in Malignancy*—The general result of Menten's study is that in nearly all the cases of cancer or sarcoma examined, there is to be found an alkalinity of the serum greater than that of the serum of normal individuals Of the seventy cases examined by Menten only three or four were found which had an alkalinity of the normal amount or less than normal In all other cases there was some excess of alkalinity and in some of the cancers of the internal organs this was very marked In one case in which bicarbonate was given there was also a very marked increase in rate of growth of the cancer This rise of alkalinity in the blood, while generally occurring in cancer, is not specific for cancer It was observed in several other conditions On the other hand, in certain heart lesions with dyspnea and various other nonmalignant diseases, the alkalinity is reduced below the normal In diabetes mellitus, in the state before acidosis, there is an abnormally high alkalinity High alkalinity is not, therefore, a certain indication of cancer, but its presence in suspected cancer is an added reason for a positive diagnosis The examination of the alkalinity of the serum may, therefore, be of considerable practical assistance in the diagnosis of this disease

Journal of Laboratory and Clinical Medicine, St. Louis

May, II No 8

57 *Cases of Unusual Aneurysms P G Woolley, Cincinnati—p 525
58 Toxicity of Heterologous and Homologous Serums. C E Roser, Ann Arbor, Mich—p 536
59 *Chemistry of Pernicious Anemia. T L Squier, Ann Arbor, Mich—p 552
60 Two Cases of Fatal Heroin Poisoning W D McNally, Chicago—p 570
61 Animal Inoculations Supplementary to Introductory Course in Pathogenic Bacteriology W H Manwaring and J T Connell, Stanford University, Calif—p 573
62 Technic with Fridericia Apparatus M J Breuer, Lincoln, Neb—p 575
63 Cyanid Poisoning in Case of Typhoid. L Hektoen, W S Haines, Chicago, and V C Vaughan, Ann Arbor, Mich—p 576
64 *Improved Test for Indican in Urine F C Askenstedt, Louisville, Ky—p 578
65 Diagnosis of Malignant Tumors by Paraffin Sections of Centrifuged Exudates F S Mandlebaum, New York—p 580

57 **Cases of Unusual Aneurysms**—Woolley cites cases of aneurysm occurring in the innominate artery, the superior mesenteric artery In connection with the almost completely calcified splenic artery Aneurysm associated with a congenital cardiac septal defect in a young infant

59 **Chemistry of Pernicious Anemia**—Squier states that pernicious anemia may be considered the result of a gastro-intestinal disturbance leading to destruction of mucosa sufficient either to allow undigested proteins to leak through into the blood stream where their parenteral digestion liberates protein poisons, or to the absorption of known hemolytic toxins produced in the course of intestinal putrefaction such as, that is, p-oxyphenylethylamin In either case the poison has a destructive influence on the intestinal mucosa, as well as the more evident hemolytic effect, and this results in the establishment of a vicious circle Splenectomy lessens the severity of the disease by increasing the resistance of the reds to hemolytic agents When the hemolymph glands and accessory spleens take on the splenic function a relapse occurs By injections of hemolysins, such as saponin, experimental anemias can be produced in animals that are apparently identical both in the blood picture and course with true idiopathic pernicious anemia

64 **Improved Test for Indican in Urine**—The qualitative test for indican described by Askenstedt is a simplified procedure of his quantitative test published in 1912, and is offered to those practitioners who can not afford the twelve minutes necessary for a quantitative determination Dilute the urine until it has a specific gravity of 1 005 For example if urine shows a specific gravity of 1 017, dilute five parts of urine with twelve parts of water, if its specific gravity is 1 021, dilute five parts of the urine with sixteen parts of water etc corrections being made for temperature An exception is made for diabetic urine, which is diluted until its urea content is 0 5 per cent Place 10 c c of the diluted urine in a test tube and warm over a flame until the lower end of the tube begins to feel hot to the hand Then add 8 c c chloroform and mix by shaking a few times Ten cubic centimeters of a solution of 0 4 per cent perchlorid of iron in concentrated hydrochloric acid (Obermeyer's reagent) is now added and, with the tube duly stoppered, quickly extract the indigo by shaking the tube two minutes, holding it in a horizontal position By releasing the stopper once or twice during the procedure, squirting will be prevented After this, let the chloroform fall to the bottom of the tube, then pour off most of the supernatant fluid, fill the tube nearly full with water, invert it a few times to wash the chloroform, and let it again precipitate in the tube If indican is normal in amount, the chloroform will remain white or show a mere trace of blue Any increase in blue exhibits a proportionate excess of indican The reading should be made as soon as the chloroform is precipitated, for on standing the chloroform slowly becomes transparent, with an increase in the shade of blue when present

Journal of Nervous and Mental Disease, Lancaster, Pa

May XLV No 5

66 *Comparative Study of Cases Showing Thalamic Lesions at Necropsy A B Evarts Washington, D C—p 385
67 Spinal Type and Family Form of Progressive Muscular Atrophy as Appearing in Adults. G W Robinson, Kansas City, Mo—p 401
68 Variations in Sensory Threshold for Faradic Stimulation in Psychopathic Subjects G P Grabfield *Boston*—p 410
69 *Case of Anomalous Torsion Spasm F X Dercum *Philadelphia*—p 420
70 *Make Up of Atypical Cases of Manic Depressive Insanity S Clark Kankakee, Ill—p 424

66 **Cases Showing Thalamic Lesions at Necropsy**—Among the last thousand necropsies held at the Government Hos

10 **Treatment of Bronchial Asthma**—This communication refers to a particular treatment which Auld has been applying in certain selected cases of bronchial asthma The patients have been free from all disease other than the bronchial affection, and although more or less emphysema and bronchial catarrh have been present they have not been of a high degree or such as to create dyspnea in the intervals of freedom (more or less) from the attacks The method Auld employs is immunization by the subcutaneous injection of a water solution of peptone To being with, ½ gm of peptone dissolved in about 5 c c distilled water at blood heat is injected at an interval of three or four days during the first week The next week two injections each of ¾ gm are similarly given and in the third week two injections of 1 gm in 7 to 10 c c water In certain cases this may be sufficient severer cases may require 1 gm weekly or biweekly for three weeks more No apparent constitutional reaction follows and properly carried out there should be little or no local reaction In several cases of moderate asthma the symptoms have become perfectly quiescent while others have greatly benefited In one case three months have elapsed without any recurrence Sometimes the effect is very rapid the patient experiencing relief after one injection In cases in which attacks of great severity occurred every two or three months a few weeks' treatment beforehand has caused the attack to abort

Journal of Laryngology, Rhinology and Otology, London

April XXXII No 4

11 Cerebral Symptoms After Nasal Operation St C Thomson—p. 113
12 Causation and Prevention of Educational Deafness M Yearsley—p 117 To be continued
13 Lumbar Puncture in Mastoid Disease A. Ryland—p 125

Lancet, London

May 5 I No 4888

14 *Twenty Five Cases of Tetanus H R Dean—p 673
15 *Intramuscular vs Intrathecal Route in Treatment of Tetanus by Injection of Antitoxin D Bruce.—p 680
16 Intrathecal Route for Administration of Tetanus Antitoxin F W Andrewes and T J Horder—p 682
17 *Comparison of Subcutaneous with Intravenous and Intrathecal Administration of Tetanus Antitoxin in Experimental Tetanus F Golla—p 686
18 Statistical Note on Analysis of Cases of Tetanus in British Expeditionary Force M Greenwood, Jr—p 687
19 *Bacillus Resembling B Tetani R S Adamson and D W Cutler—p 688
20 Case of Tetanus Treated by Intrathecal and Intramuscular Injection of Antitoxin J Gow—p 689

14 **Treatment of Tetanus**—All the twenty-five patients whose cases are reviewed by Dean had had suppurating wounds but in the majority of cases the wounds were not more serious and the suppuration had not been more considerable than in the average case sent home to a hospital In four cases the wounds were of a comparatively trivial nature In nine cases the wounds at the time of the onset of tetanus had completely or almost completely healed Dean states that if every wounded soldier, irrespective of the size or condition of the wound was given a prophylactic injection on his arrival at home there would in all probability be a still further reduction in the number and severity of cases of tetanus Compound fractures are a particular source of danger and were present in eleven of twenty-five cases of tetanus In three of the twenty-five cases the disease ran an extremely short and mild course. These were the only three patients who had received a prophylactic injection after their arrival in England One result of prophylactic injection is to prolong enormously the incubation period, with the result that tetanus may occur after the wounds have completely healed and the patient has been transferred to a convalescent hospital Under these circumstances the earliest signs are readily overlooked The pain associated with the early and local symptoms may lead to a diagnosis or rheumatism or muscular rheumatism.

The earliest signs may consist of clonic or tonic contraction of muscles in the immediate neighborhood of a wound, usually in the nearest flexor group The signs may remain localized for many days, and it is characteristic of some cases occurring in inoculated patients that the period of onset is enormously prolonged After a longer or shorter interval generalization occurs The muscles of the jaw, neck and abdomen become stiff There is profuse perspiration and the reflexes of the lower limbs are exaggerated In many cases the pulse rate may be very rapid and the temperature normal On the other hand even in inoculated persons and after a very long incubation period the disease may begin suddenly with spasm of the muscles of the jaw and neck Of five mild cases treated by intramuscular and subcutaneous injections of serum five recovered Of fourteen cases treated chiefly by intravenous injections thirteen recovered Of five cases treated by intrathecal with or without other injections three recovered One patient who was given an intravenous and subsequently an intrathecal injection died If the signs are well localized and are not spreading rapidly, Dean says, intramuscular injections afford an adequate method of treatment In severe cases and in those in which signs are generalized an intravenous injection (30 000 units) under deep chloroform anesthesia should be given *After such injection* the further progress of the disease is usually arrested, and definite improvement may be expected two to seven days later

The essential principle of serum treatment is to give a very large dose of antitoxin at the earliest possible moment This object can be most easily attained by the intravenous route In four cases serum treatment was confined to a single intravenous dose of 30 000 units In three other cases no serum was given subsequent to the intravenous injection In these seven cases recovery was as rapid as in six other cases in which subsequent injections were given The serum of patients was shown to contain free antitoxin at various intervals up to thirty nine days after an intravenous injection of 30 000 units

15 **Tetanus Treated by Injection of Antitoxin**—Experiments conducted by Bruce on monkeys exhibit the effect of a single injection of antitetanic serum on a single precurrent dose of tetanus toxin They show a difference between the results obtained by the intramuscular and intrathecal methods respectively The contrast seems sufficiently marked to be significant although the experiments are at present few in number The results are distinctly in favor of the efficacy of the intrathecal as against the intramuscular method

16 **Intrathecal Route for Tetanus Antitoxin**—Andrewes prefers the intrathecal route but he would like to see the effect of really adequate doses (20 000 to 30 000 units) intrathecally given at the very onset of such cases

17 **Tetanus Antitoxin in Experimental Tetanus**—The results obtained by Golla in a series of animal experiments show the indubitable superiority of the intravenous and intrathecal routes over the subcutaneous Such superiority is attributed to the slow absorption of tetanus antitoxin injected subcutaneously

19 **Bacillus Resembling B Tetani**—In the course of the bacteriologic examination of cases of septic and gangrenous wounds Adamson and Cutler noticed on nine occasions in films and have four times isolated once from a blood culture taken after the death of the patient an anaerobic bacillus closely resembling in appearance the *B tetani* Two of the four patients from whom the bacillus was isolated had developed tetanus The bacillus is a strict anaerobe. It is characterized by the production of large terminal spores which are quite round The average length of the bacillus is between 6 and 7 micron In width it varies between 1 and 2 micron These measurements do not include the terminal spore The spore itself is quite round and varies from 1 7 to 2 2 micron in diameter The bacillus is motile, but the movement is never rapid and quickly disappears in the presence of air Old cultures do not show any motility The bacillus grows well on agar and glucose agar The organism ferments glucose, lactose and maltose with the production of a slight amount of acidity, but no clotting of the serum or gas production Gelatin is not liquefied and no indol is produced in broth cultures The bacillus is gram-negative, though young cultures especially in broth, may be gram-

positive Inoculations of pure or mixed cultures into guinea-pigs have failed to produce any symptoms suggesting tetanus

Practitioner, London

May XCVIII, No 5

21 Gunshot Fractures of Arm C H Fagge —p 401
22 *Treatment of Secondary Hemorrhage J Taylor —p 413
23 Convalescence of Dysentery and Its Complications A Howell —p 419
24 Shell Shock Stammering and Other Affections of Voice and Speech C MacMahon —p 427
25 Outbreak of Cerebrospinal Fever at Reading, 1915 to 1916 R Donaldson —p 436
26 Trench Fever—Mainly Its Clinical Manifestation J M A Costello —p 456
27 Treatment of Septic Gunshot Fractures of Long Bones by Means of Steel Extension Appliances R E Humphry —p 467
28 Acidosis, with Special Reference to Children I Hewat —p 477
29 Prostatic Enlargement and Its Treatment J H Nicoll —p 487
30 Continuous Counter Irritation as Therapeutic Measure in Rheumatoid Arthritis, etc, Details of Technic W J Midelton —p 491

22 **Treatment of Secondary Hemorrhage** —Beyond the ordinary cleansing and drainage of wounds, Taylor considers that little can be done to prevent secondary hemorrhage. Several of the medical officers, however, observed that bleeding seemed to be more frequent in cases in which sodium hypochlorite solutions was being used There were more cases of hemorrhage from the wards where it was being used as a routine Taylor suggests that it is possible that it has a digestive effect on the softened walls of the vessels

Sei-I-Kwai Medical Journal, Tokyo

April, XXXVI No 4

31 Immunoreaction of Gonorrheal Patient Serum T Watabiki —p 19

Bulletin de l'Académie de Médecine, Paris

April 24 LXXVII, No 17, pp 537 554

32 Organic Arsenic Associated with Quinin in Treatment of Malaria A Gautier —p 544
33 Tardy Cephalic Tetanus with Postoperative Reactivation. G Gross and L Spillmann —p 548
34 Trench Hemeralopia Aubaret —p 552

Journal de Radiologie et d'Electrologie, Paris

January February II, No 7, pp 433 496

35 *Localization of Foreign Bodies in the Eye (Corps etrangers de l'oeil) J Belot and H Fraudet —p 433
36 Extraction of Foreign Bodies under Intermittent Screen Control Sauve —p 451
37 Electricity in the Reeducation of Neuropathic Troubles in the Wounded A Laquerriere —p 459
38 *War Wounds of the Nerves J Limouzi —p 468
39 Electric Treatment of Cicatricial Adhesions Drevon —p 475
40 Advantages of Slow Interrupters in Radioscopy A Zimmern —p 479
41 Exact Centering of the Tube Not Necessary-for Roentgen Localization G A Andrault —p 484
42 Sliding Gage for Radioscopic Localization by Harej's Method J Tison —p 486

35 **Localization of Foreign Body in the Eye** —Belot and Fraudet emphasize the advantages of rapid radioscopy and of radiography in five positions according to a geometric system they have devised and here describe with twenty illustrations and a large plate. With this system they were able to locate minute scraps even of aluminum, stone or glass, which are relatively transparent for the Roentgen rays In one instance Belot thus localized a fragment from a test tube, the particle of glass was 1 mm long by ½ mm wide and thick They say localization with the stereoscopic technic is possible only when the eye is incapable of any movement The preliminary radioscopic examination, after the patient has sat for twenty minutes in the absolutely dark room, serves to locate the foreign body in one quarter of the orbit and may locate it with sufficient precision If not, they proceed to radiography As the eyeball revolves on its transverse or vertical axis, if the foreign body changes its place proportionally to the displacement of the periphery of the eyeball, then the foreign body must be in the eyeball itself or the muscles in contact with it If the foreign body is in the parts outside of the eyeball, its displacement with different movements of the eyeball occurs according to geometric principles Study of the type of displacement shows at once the muscle involved In twenty-five cases in which this technic has been applied the foreign body was found exactly at the point in the operative cases An error of a few millimeters in localization would be negligible elsewhere, but the eye is unable to stand any groping Even with intermittent screen control, compasses, etc., we have no guarantee of success, but the system here described is incapable of failing, it is asserted, provided the eyeball is movable and vision is not lost in the other eye All that is required is to outline a curve, drawing the outline on transparent paper placed over the five radiographs in turn The tracing thus obtained locates the foreign body with precision

38 **War Wounds of the Nerves** —Limouzi declares that after a war wound of the nerve has healed it should be given three months of thorough medical treatment, massage, hydrotherapy, mechanotherapy, electricity, hot air, etc. Then if the clinical signs are growing worse or are stationary while the reaction of degeneration is growing worse, or this is stationary while the clinical symptoms are growing worse, then operative measures are called for They are optional when both are stationary, but it is better to refrain from operative measures if one or the other or both are improving or if only one is stationary The final outcome after suture of a nerve is still somewhat dubious, but the favorable results after freeing a nerve from compression by cicatricial tissue, etc, are beyond question He exclaims that as the wounded have no desire to return to the firing line as a rule, and often are not particularly interested in regaining full earning capacity, this "inhibition of good will" handicaps treatment of neuropathies in many cases He says that he has had only about a dozen in all among his cases of this kind in which the men devoted all their energy, will power and courage to get cured as quickly as possible

Lyon Médical

April CXXVI, No 4 pp 157 204

43 *Sudden Death from Nervous Phenomena of Pleural Origin Piery —p 157
44 Treatment of Capillary Bronchitis in Infant by Inhalation of Steam H Rondet —p 164
45 *French Pharmaceuticals B Lyonnet —p 195

43 **Sudden Death from Nervous Phenomena of Pleural Origin** —The man's chest had been pierced by a bullet It had entered at the base of the neck on the right side and emerged at the lower part of the posterior thorax, between the middle of the margin of the scapula and the spine There was no hemoptysis nor oppression, merely a slight rise in temperature for a week, and signs of a small hemothorax with probable pneumothorax The sixteenth day the respiration transiently became accelerated, the pulse still normal The man then lost consciousness, with stertor and anal incontinence, and he died in half an hour Necropsy revealed that the bullet had fractured the fourth rib, a small piece falling back like a hinge into the pleural cavity Whether the fatality was due to a pleural reflex or gaseous embolism—the only plausible explanations—it teaches the lesson that after a wound of the chest the man should be kept in bed for weeks Also the wisdom of a preliminary injection of morphin to ward off danger of a possible pleural reflex action in the course of inducing an artificial pneumothorax, or when a man wounded in the chest has to be moved In this case the first symptom of trouble—the acceleration of the respiration—was observed as the man was placed on a litter and wheeled into another room for roentgenoscopic examination It was applied reclining The man died in half an hour after his return to bed

45 **French Pharmaceuticals** —Lyonnet refers to the international exposition of articles of all kinds that has been held twice at Lyons since the war began At the first of these 'foires d'echantillons" there were only nine firms exhibiting pharmaceutical products of domestic manufacture, but this year thirty-two firms exhibited chemical, medical and pharmaceutical products He enquired of each exhibitor what he was making new, and whether he was producing any pharmaceuticals formerly imported The responses, he says, were interesting and encouraging for the future as he describes in

detail Benzonaphthol has been scarce, at one time none could be procured but now it is being produced in large quantities A number of preparations, arsenobenzol neoarsenobenzol allocaine and other equivalents for drugs formerly imported show' he reiterates that French manufacturing chemists are trying to make up for their forty years of neglect of this field, although certain firms are devoting their entire output to the chemicals needed for munitions and others are afraid to venture too much

Paris Medical

April 21 VII No 16 pp 309 324

46 Amebic Dysentery of Suprarenal Type R D de La Riviere and Villerval —p 310
47 Case of Supposed Gonorrheal Meningitis A Blind and R Ricard —p 312
48 Radiogram Showing Four Months Fetus in Utero L A Weil —p 314
49 War Wounds of Urinary Organs M Devroye —p 315

46 **Suprarenal Form of Amebic Dysentery** —Riviere and Villerval report a case of amebic dysentery which developed in successive pushes the second being much more serious than the first The special feature of the case was the evident injury of the suprarenals the weakness being extreme with very low blood pressure and white dermographism The ameba evidently produces some toxin that makes its influence felt on the suprarenals in particular They say that emetin should be begun early in amebic dysentery and continued long after the disappearance from the stools of the ameba and especially of its encysted forms With suprarenal manifestations epinephrin is indicated its action here being as pronounced as in microbian infections

Presse Medicale, Paris

April 12 XXV No 21 pp 209 216

50 *Examination of Coagulating Power of Blood as Preliminary to Operations P E Weil —p 209
51 Malarial Fever Consecutive to Relapsing Fever Duchamp —p 210
52 Cutting One Stump to Form Peg to Slip into Other Stump (Autoenchevillement.) J Calve —p 212
53 The Therapeutic Element in Action of Dakin's Solution (La chloramine) B Desplas and A. Policard —p 213

50 **Determination of Coagulating Properties of the Blood as Aid in Surgery** —Weil remarks that certain complications following operations seem to be the consequence of abnormal conditions of the blood permitting hemorrhages or thrombosis Aside from hemorrhage due to defective technic really menacing hemorrhage occurs only with liver disease or a tendency to hemophilia Postoperative thrombosis is rare and is encountered as a rule only after certain special operations such as removal of the appendix or of a uterine fibroma It occurs without infection and in the fibroma cases only when there has been much loss of blood before He insists that it is possible to detect the predisposition beforehand by determining the coagulating power of the blood The physician should inquire as to the personal and family history in respect to hemophilia and thrombosis with examination of the skin for traces of extravasation phlebitis etc, and test the coagulating time of the blood by distributing a little blood in tubes of a uniform caliber This is generally instructive enough for the purpose

But the actual coagulating power of the blood must be determined For this he applies M Bloch's coagulometric technic 1 c c. of blood from a vein is drawn into 4 c.c. of an isotonic solution (sodium citrate 1 gm , sodium chlorid 7 gm. and distilled water 400 c c) A set of test tubes contains from 4 to 3 c c. of an isotonic solution of sea salt (seven per thousand) To each of these tubes is added a 5 per cent. solution of calcium chlorid in amounts of 0 1 c c , 0.2 c c , 0 3 c.c., 0 4 c.c., and 0 5 c.c Then 0.2 c c of the citrated blood is added to each tube Each should contain 4 c c. of fluid In twelve to fifteen hours the coagulation process is complete The citrate prevents the blood from coagulating by inactivating the calcium in the blood Adding traces of calcium restores the coagulating power He estimates this by the ratio between the amounts of calcium and of citrate Control tube 1, no calcium tube 2, 4, tube 3, 2, tube 4, 1.33, tube 5, 1, tube 6 0 8 Time is not regarded In normal conditions, coagulation begins in tube 3 index 2 (threshold of coagulation), and finishes in tube 5, index 1 In children under 10, it usually begins with index 4 and ends with index 1.33 With a predisposition to hemorrhage, both threshold and finish are retarded This technic reveals also any excessive tendency to coagulation Further information can be obtained by pricking the ear with a lancet and counting the half minutes before the blood stops spontaneously With blood drops 1 cm in diameter, hemostasis occurs normally in from two and a half to three and a half minutes The physiologic or pathologic condition of the capillaries is revealed by slight constriction of the arm such as is applied for venesection which may induce a punctate hemorrhagic appearance below, showing that the capillaries are extra fragile

To profit by the information derived from these tests, he advises subcutaneous injection of 20 or 40 c c of normal human or animal blood serum when the blood does not coagulate normally This corrects conditions in acquired hemophilia so that operative hemorrhage need not be feared But with familial hemophilia the operation should be postponed until the condition can be corrected by injections of blood serum every two months for a year It is thus possible to modify the blood so it will coagulate in thirty or forty-five minutes instead of three six or twelve hours as before Calcium chlorid by the mouth or in injections has never improved the state of the blood in his experience The type of blood anomaly in which coagulation is not much retarded, but there is no retraction of the clot is the substratum of a true hemorrhagic diathesis sometimes inherited The hemorrhages are more liable to occur spontaneously than with hemophilia as in acute purpura Weil gives a subcutaneous injection of 20 or 30 c c of human blood forty eight hours before the operation This supplies the hematoblasts which are lacking in these cases It is useful likewise in the hemorrhagic tendency with liver disease

When the tests show excessive coagulability of the blood, thrombosis menaces and ether and chloroform should be avoided as they injure the blood and may bring on thrombosis In such a case blood serum should never be injected, and it must be remembered that losses of blood enhance the coagulating power of the blood The blood can be rendered less coagulable by citric acid Chantemesse prescribes it in the daily dose of 12 or 18 gm of citric acid diluted in a large amount of water Weil adds that sodium citrate in similar doses might answer the purpose Subcutaneous injections of saline or glucosed isotonic physiologic solution might be useful or a 47 per thousand solution of sugar by the drip method In conclusion he remarks that it seems logical to utilize the anticoagulating action of hirudin the active principle of the heads of leeches but he does not know of its application in the clinic

Progres Médical, Paris

April 14 XXXII No 15 pp 123 130

54 Psychotherapy in Wartime G L Duprat —p 123 Commenced in No 14 p 113
55 Pathogenesis and Treatment of Ciliary Blepharitis. A Cuenod —p 125

April 21 No 16 pp 131 138

56 Deformity of the First Left Rib A Clerc R Didier and J Borrie —p 131
57 Mencière's Iodoform Balsam Mixture for Wounds on the Firing Line Delestre —p 133
58 Intravenous Injections of Colloidal Sulphur in Treatment of Chronic Articular Rheumatism C Jeanneney —p 134
59 Phosphorus Alleged to Have Certain Properties of Radium F de Courmelles.—p 136

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 21 XLVII No 16 pp 481 512

60 *Influence of Loss of Certain Organs on Development of Experimental Teratoid Tumors. A Katase —p 481
61 Iontophoresis of Heavy Metals H Koller —p 485 To be continued.

60 **Experimental Teratomas** —Askanazy has previously reported the results of his experiments in the production of tumors in rats by injection of a suspension of macerated fetal tissues Katase here reports further series in this line of

experiences, but the rats had had previously the spleen or one kidney removed or both testicles or the thyroid He also used rats with goiter Among the conclusions tentatively drawn from the results observed are that the spleen seems to favor the growth of fetal tissue while it checks the growth of transplanted rat cancer tissue No influence from the testicles in either direction was apparent Removal of one kidney seemed to promote the growth of the teratoid tumor

Gazzetta degli Ospedali e delle Cliniche, Milan

March 29, XXXVIII, No 25, pp 385 400

62 *Variety of Initial Symptoms with Epidemic Cerebrospinal Meningitis G Pisano —p 388

April 1, No 26, pp 401 416

63 *Abscess in Preperitoneal Cavity G Onano —p 401

62 **Mistakes in Diagnosis of Epidemic Meningitis**—In the first of the three cases related, the symptoms at first indicated merely a traumatic purulent ophthalmia suggesting danger of involvement of the meninges In the second case, malarial fever, probably of the pernicious type, was diagnosed, and in the third, left purulent otitis media, threatening likewise involvement of the meninges All these patients complained of intense headache, but at different points in the head, dermographism was pronounced and the temperature high Pisano exclaims that these three symptoms alone should have suggested the proper diagnosis or at least have called for lumbar puncture to aid in differentiation The first and third patients recovered but the second died His disease had run along for four days without suspicion of meningitis, and hence without specific serotherapy Baccarani has recently published some cases of what he calls *meningite ritardate*, in which the symptoms at first led to the diagnosis of typhoid or rheumatic sepsis There was intense headache in all his cases, but as it was not restricted to the back of the head, it was not ascribed to meningitis In Pisano's cases the meningitis was not suspected until the sixth, fourth or fifth day of the disease

63 **Abscess in Cavity of Retzius.**—Onano comments on the difficulty of differentiating an abscess in the preperitoneal cavity, as it suggests various abdominal affections In the case reported the abscess was secondary to one in the right foot The intervening lymphatics showed nothing pathologic

Policlinico, Rome

April 22, XXIV, No 17, pp 537 568

64 *Immediate Intervention for War Wounds G Pisano —p 537
65 Bridge Plaster Casts for Compound War Fractures A Ascarelli —p 545
66 Abscess of the Spleen G Morelli —p 550

April, Medical Section No 4, pp 145 188

67 *Case of Cerebrospinal Sclerosis A Murri —p 145 Commenced in No 3, p 97
68 War Wounds of Brain and Spinal Cord G Mingazzini —p 172 Continuation

64 **Immediate Intervention for War Wounds**—Pisano advocates the definite operation at once, deprecating the old way of first aid, then new examination and dressing by each surgeon through whose hands the wounded man passes in the clearing station, on the train and in the base hospital He knows of instances where the wound was thus dressed five times within twenty-four hours In his service now, close to the firing line, 3,171 wounded have been given treatment at once, including 172 extremely severely wounded The mortality was less than 3 per cent Thorough surgical treatment was applied in 9 per cent He comments on the ease
[illegible] ojectiles can be extracted when this is done at
ment. The preli y have had a chance to sink by gravity deep
patient has sat fo In one case a large clot of dirt had been
room, serves to loc te the left thigh In only 399 cases had
orbit and may locate it by bullets Among the advantages
proceed to radiography rative treatment are that there is no
verse or vertical axis, if atients away The benefits are so
proportionally to the disp they outweigh the danger of being
eyeball, then the foreign bo
or the muscles in contact wi Sclerosis—Murri devotes about
the parts outside of the eyel he patient was under attentive
ferent movements of the eyeball x years, and the necropsy findings confirmed the diagnosis in every respect The sphincters were normal throughout, which was explained as the corresponding part of the spinal cord was found apparently intact A plate of microphotographs is given, and the incompleteness of the symptoms is emphasized Although the trouble was of ten years' standing, yet there was no complete paralysis of any nerve, no complete atrophy of any muscle The absence of pains, paresthesias, sensory hallucinations, convulsions and vertigo can be explained only by the extreme slowness of the process There were no waves of improvement at any time such as are generally observed with such affections The case teaches further that it is not necessary to wait for pronounced symptoms for the diagnosis The tremor of the tongue, partial facial paralysis, the peculiar monotonous tone of voice, the scanning speech and the absence of the pharyngeal reflex persisted unmodified during seven years or more No other affection but multiple sclerosis would induce such slight modifications as these but *so persistent and so* insidious Murri suggested in 1911 that the basis of multiple sclerosis might be a "diathesis of connective tissue" The fibrosis in this case seemed to have spared completely the thyroid, pituitary body and the suprarenals

Riforma Medica, Naples

April 7, XXXIII, No 14, pp 365 392

69 The Profession after the War (Il "dopo guerra" per i medici) L Ferrannini —p 365
70 Influence of Vaccination on Course of Typhoid and Paratyphoid P Guizzetti —p 366 Commenced in No 13, p 338
71 Traumatic Fibrous Growth in Joint (Della cellulo dermite auto-contusiva degli arti) A Mori —p 371 To be continued
72 *Case of Pneumococcus Peritonitis C R Belgrano —p 378
73 Welfare Work for Tuberculous Soldiers (Per i feriti della tubercolosi) A Ferrannini —p 381

72. **Pneumococcus Peritonitis**—The girl of 13 had presented abdominal symptoms for ten days, with pain, fever, pulse 120, diarrhea and scanty urine, but agglutination tests were negative and the blood seemed to be sterile An exploratory puncture showed pus and pneumococci in the peritoneum, and it was cleaned out through a median laparotomy, after which prompt recovery followed The abdominal symptoms had been preceded by coryza and labial herpes, but otherwise the girl had been in good health and she has been well since

Brazil-Medico, Rio de Janeiro

April 7, XXXI, No 14 pp 113 120

74 Endamebas of Dysentery H de B Aragão —p 113 Conclusion
75 Itch (O micuim) E von Bassewitz —p 115 To be continued
76 *Heliotherapy in Brazil A Moncorvo, Jr —p 116 Conclusion Commenced in No 5, p 37

76 **Heliotherapy in Brazil**—Moncorvo gives a long list of Brazilian physicians who have been systematically utilizing sun baths in treatment and prophylaxis of late years, and describes his own experience in the special service for heliotherapy which has been added to the dispensary connected with the Instituto de Protecção e Assistencia of Rio de Janeiro The extremely gratifying results already achieved with it, he says, encourage wider extension of the scientific application of sun baths in a long series of affections, particularly in tuberculosis of the bones, skin diseases, atonic ulcers and secondary anemia of various origins He relates that heliotherapy dates from antiquity, the Egyptians practicing it among others In modern times Sydenham was the great precursor of Finsen, but Bonnet of Lyons, in 1845, demonstrated the benefit from sun baths in tuberculous bone affections Moncorvo mentions, along with Rollier and Turck, Monteunis and Byssaia-Barreto as having published notable works in recent years on heliotherapy

Cronica Medica, Lima, Peru

March XXXIV No 645 pp 77 116

77 Arequipa Mineral Springs in Peru (El balneario de Jesus) E Escomel —p 80
78 Abortive Case of Adams Stokes Syndrome E Odriozola —p 92
79 Case of Malta Fever in Peru J M Chiriboga —p 98
80 *Clinical Study of Uremia (Azohemia.) M A Schreiber —p 100

80 **Uremia**—Schreiber remarks that pruritus may be the first symptom to attract the patient's attention to the reten-

tion of nitrogen in the blood but usually the uremia merely accompanies retinitis somnolency digestive and other disturbances pointing to the chronic nephritis In one of his patients the reds numbered only 1 080 000 and the whites 7 000, he had profuse hemorrhages from stomach nose and lungs The urea content of the blood was 3 1 and 4 06 gm at a two week interval Two other patients had pericarditis in the course of severe uremia but it was a necropsy surprise in one case and in the other was detected in the course of clinical examination not having caused any appreciable symptoms The blood contained 4 gm of urea The close connection between the uremia and the high blood pressure was evident in all but two of his cases of chronic nephritis

Prensa Medica Argentina, Buenos Aires

March 30 III No 30 pp 317 [illegible]

81 Mental Disturbances with Heart Disease M R Castex and J C Vivaldo —p 317 To be continued
82 Answer to Criticisms of Normal Beef Serum in Serotherapy of Anthrax R Kraus J Penna and others.—p 318.
83 Spontaneous and Transmissible Tumor in White Rat. A H Roffo —p 320
84 The Oculocardiac Reflex S B Amadeo —p 323 Continuation

Semana Medica, Buenos Aires

March 15 XXII No 11 pp 315 [illegible]

85 Nematode Parasite of the Frog S E Parodi —p 315
86 Gastrulation in Mammals M Fernandez —p 318
87 Prophylaxis of Venereal Diseases. J A Lopez.—p 321
88 Welfare Work for Young Infants. (El problema de la tutela higienica de la primera infancia) E Cacace —p 331

Siglo Medico, Madrid

April 21 LXII No 3306 pp 265 284

89 *Aspiration Technic for Extraction of Cataract I Barraquer —p 266
90 Intraspinal Treatment of Syphilis of the Nervous System C R Lafora —p 267 Continuation
91 Present Status of Plastic Surgery Coyanes.—p 278 Commenced in No 3304 p 226

89 **Vacuum Aspiration Extraction of Cataract** —Barraquer emphasizes that anatomically speaking a cataract is a cyst and should be treated as such He uses for extraction of the cataract a little device that acts on the principle of a cupping glass It is applied directly to the cataract with aspiration from an electric motor the vacuum aspiration under complete control Any kind of cataract he says can be extracted in this way gently and absolutely thoroughly even the minutest scraps of opaque tissue coming away and all without the least pressure on the eyeball or vicinity and without the necessity for introducing any sharp instruments inside the eyeball He has applied it for thirty three ripe senile cataracts twenty-four not yet ripe and five overripe and also was able to extract by this means a scrap of glass inside the lens in one case The success was prompt and complete in every case but two in these the capsule had been lacerated before so that aspiration could not proceed according to the normal technic He suggests that it might be possible by this means to improve the lens in cases of extreme myopia. With cataract, he adds there is no need to wait for it to ripen.

Russkiy Vrach, Petrograd

XVI No 4 pp 73 96

92 Pathogenesis of Addison s Disease A I Yushtchenko —p 73 To be continued
93 Expediency of Ligating Vein in Operating on Wounded Artery (O perevyazki veni pri prekrashtchenii toka krovi v arterii) V N Savvin —p 78
94 *War as the Struggle for Existence of Nations. G M Yusifoff —p 80 Commenced in No 3 p 49
95 *Benzin for Isolation of Typhoid Bacilli V I Nedrigailoff —p 83
96 Etiology of Gas Phlegmon A E and V E Burovikh —p 84 To be continued
97 Experimental Cholesterinemia and the Disturbances It Induces in the Organism N N Anichkoff —p 89 To be continued

94 **War as the Struggle for Existence of Nations** —Yusifoff discusses the causes of war from the standpoint of biology, as also the question of the possibility of perpetual peace

95 **Benzin in Isolation of Typhoid Bacilli** —Nedrigailoff comments on the tendency of physicians to keep in the hospitals unduly long those convalescing from cholera, typhoid and dysentery for fear that they may develop into carriers It would be better from every point of view to be able to sift out the carriers by early and repeated bacteriologic examination This is possible with cholera, as only cholera vibrios grow luxuriantly in peptone water But until lately he says we have not had any reliable means to differentiate typhoid germs in the stools of carriers The various technics to date can be applied only to minute quantities of the material and this minute quantity may not happen to contain any of the germs This renders extremely interesting the technics proposed comparatively recently which permit the use of large quantities of stool One of these is Vasilevsky's application to feces of the method of detecting typhoid bacilli in water by addition of an agglutinating serum By this means he never failed to find typhoid bacilli in the stools when any were to be found in the blood

Bierast differentiates typhoid and colon bacilli by their different response to the action of benzin, and Nedrigailoff has found this surprisingly effectual in permitting the growth of typhoid bacilli from the stools of typhoid patients and convalescents while the proliferation of other bacilli seems to be checked by it A mixture of equal amounts of cultures of typhoid and of colon bacilli in a little bouillon were mixed with an equal volume of benzin and kept at room temperature for fifteen hours Endo agar was then inoculated from the mixture The control dishes showed the usual colonies of colon bacilli growing luxuriantly while in the benzin dishes there were only a few scattered colon bacilli colonies in the midst of numerous colonies of typhoid bacilli Hall Schusch and others have confirmed Bierast s statements

Nedrigailoff used 3 or 2 c c of benzin to 7 or 8 c c of the mixture of stools and bouillon (in the proportion of a teaspoonful of feces to 2 c c of bouillon) Success depends on the lively and long continued shaking up of the small vial It is shaken up vigorously by hand for five or ten minutes and then this is repeated after an interval of fifteen or twenty minutes The vial is then set aside protected from the light for eight or ten hours at room temperature The material to inoculate the Endo agar in the Petri dish is taken from the sediment with a Pasteur pipet He applied this technic also in differentiation of the *Staphylococcus aureus* the proteus and the pyocyaneus The proteus was the only one of these that showed any growth by the tenth hour, the others showed none until after the twentieth The test was applied to stool from ten persons who had recently passed through typhoid Typhoid bacilli were thus detected in three cases paratyphoid B in one and the findings were negative in the others Control tests confirmed these findings

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

March 24 I No 12 pp 881 976

98 Familial Splenomegaly of Gaucher Type C De Lange and J C Schippers —p 890
99 Varying Efficacy of Ergot Preparations from Different Sources. (Secale praeparaten) W S van Leeuwen —p 904
100 *Isolated Traumatic Paralysis of Suprascapular Nerve G C Bolten —p 913
101 Chronic Essential Pruritus Cured by Cold Sponging (Hydrotherapeutische behandeling van een geval van huidjeuk) J C Mom —p 918

98 **Familial Splenomegaly of Gaucher Type** —This article states that the two operative cases reported bring to twelve the number of cases of Gaucher s splenomegaly on record in which the spleen was removed Nine apparently recovered after the splenectomy that is, 75 per cent, although in the two cases reported here only about three months have elapsed since the operation Of the seven children in this family, one died at the age of 2 probably a case of the same affection and the second child a girl, an unmistakable case succumbed at 11 to gastric hemorrhage The sixth and seventh children, girls over 7 and 5 presented typical cases and improved after splenectomy to such an extent that they are listed as cured The left lobe of the liver was materially enlarged in the three cases The spleen in the two operative cases showed deep clefts, in one so deep as almost to divide it into lobes The microscopic findings differed from those on record, pos-

sibly because the disease was in an earlier phase The literature on the subject is reviewed, and it is emphasized that splenectomy is the only measure that offers the least chance of a cure so far as is known to date No benefit has been reported from roentgenotherapy, iron or arsenic The spleen in some of the cases on record weighed from a fifth to a half as much as the whole body, but one of the spleens in the personal cases here reported was the smallest on record (170 gm), and the other (470 gm) the third smallest Several American cases are included in the list The latest of the cases (1914) summarized was in a boy of 14, the spleen weighed 1,320 gm Its enlargement had been verified by a physician nearly eight years before

100 **Isolated Paralysis of the Suprascapular Nerve**—The young man had fallen in playing tennis, striking on his right elbow and knee There was some pain in the shoulder for a time but it then subsided and the only disturbance left was difficulty in writing The young man had had syphilis but it has been apparently thoroughly treated and the Wassermann reaction was negative The symptoms indicated an isolated paralysis of the suprascapular nerve innervating the supraspinatus and infraspinatus muscles, with some atrophy of both Two years after the accident the man was able to write only when standing at a desk, the arm extended to the utmost and raised up forward Any attempt to lift up the arm sideways caused spasms in the upper arm Electric high frequency treatment brought some improvement then, but the long interval precluded much benefit from any treatment

101 **Hydrotherapy for Essential Pruritus**—Mom's patient was a robust man and the pruritus was so severe that it kept him awake at night Exclusion of all causes showed it to be chronic true pruritus of the skin No benefit was derived from the whole array of dermatologic and other measures until, as a last resort, the man was told to sponge his whole body with cold water every morning on rising, then, without waiting to dry himself, to get back into bed and stay there until thoroughly warm In a week of this simple hydrotherapy the man was cured The pruritus that had tormented him for years, subsided completely and there has been no recurrence during the six months to date Mom explains the striking effect in this and similar cases as due to the vasoconstriction from the cold water, followed by the dilatation from the warmth in bed, modifying the vasomotor nerves and possibly aiding in the expulsion of irritating substances in the sweat glands

Hospitalstidende, Copenhagen

April 18, LX, No 16, pp 369 392

102 *Carcinoid Tumors of the Appendix P V Tuxen—p 369

102 **Tumors in the Appendix**—Tuxen refers to tumors which resemble cancers in appearance but their course is benign Since Letulle's first description, in 1897, about 250 cases have been published The average age is between 20 and 30, but Mayo found a tumor of this kind in a girl of 5, and Elting in a man of 81 Tuxen has encountered eight cases of cancer in the appendix and only three typical carcinoid cases, he describes the whole eleven cases in detail The cancers were in four men, 19, 20, 34 and 38 years and four women between 22 and 27 The three carcinoid patients were men of 18, 21 and 48 The appendix was removed in each case for acute or chronic appendicitis In four other cases a small tumor was found in the small intestine after death from other cause, and the microscopic findings in these tumors seemed to be identical with those in the appendix carcinoid cases He reproduces the microscopic findings in one case, and reviews the literature on this type of nonmalignant submucosa tumors in the appendix and small intestine

Hygiea, Stockholm

April 16, LXXIX, No 7 pp 321 368

103 *Simulation and Aggravation of Morbid Conditions in Relation to Insurance, Workman's Compensation, Escaping Military Service, etc. F Klefberg—p 334

103 **Feigned Sickness and Factitious Affections**—Klefberg expatiates on the way in which factitious affections are becoming every day more and more important as legislation on social insurance, workmen's compensation, etc, is constantly extending its scope, to say nothing of affections induced to escape military duties He quotes Collies' remark "To most medical men, simulation of disease presents a difficult, almost an insoluble puzzle" He urges the training of specialists in this line, commenting on the importance of unmasking the first case, as otherwise a crowd of imitators follow Training is especially necessary in affections of the eye, ear and nervous system which are most often reproduced by malingerers Training is also necessary to keep from seeing a malingerer in every claimant for an indemnity He cites two typical cases to show the ease with which physicians are hoodwinked, and describes a number of tests useful to disclose simulation They include Muller's suggestion to test the alleged tender point with a second finger applied so near the first that the subject gets only one impression from them Alternating the pressure permits control of the patient's statements With much tenderness or severe pain, the pulse is liable to become accelerated, the face flush or grow pale, or the pupil dilate or contract Klefberg has seen this occur not only with pain in the limbs, lumbago, etc, but also in appendicitis, pleurisy and neuralgia Applying the induced current may prove instructive, telling the patient that the pains will be increased when the electrode reaches the painful area, but shutting off the effective current without his knowledge When told to stoop over from the hips the malingerer usually holds his spine straight and stiff, while there is always a curve in the natural spine at the neck, even with lumbago, sciatica, etc, inducing incurvature lower down The pain with sciatica is increased by lifting the other leg to a right angle or otherwise moving it, but the simulator never thinks of complaining of pain when the sound leg is exercised With true sciatica, standing with both soles flat on the floor, the heel on that side is lifted during a squatting exercise Illustrations are given of these and a number of other tests If the findings are negative with even those summarized here, the suspicion of simulation is justified

A sympathetic understanding with the patient is important although the possibility of malingering must be borne constantly in mind Instructive data may be obtained by watching how the patient comes into the room, sits down, disrobes, etc, before the actual physical examination No relative or friend must be with the patient, if he insists on having an outsider with him, the physician must insist on its being some impartial person, possibly a representative of the party financially involved Neglect of this precaution is liable to have disagreeable consequences, if nothing more than complaints of 'brutal handling" Klefberg warns further that the subject is very liable to mix in with the symptoms he is having an account of those he has had, thus obscuring a clear picture of the status presens The importance of refraining from questions liable by suggestion to influence the answers cannot be reiterated too often Disrobing, especially taking off the shoes and stockings, must be done without help, and all bandages removed For examining the legs or feet, the patient should stand on a stool, stepping up with the affected leg first.

The more honest the patient, the clearer and prompter his replies The malingerer either has an overprofuse flow of words or is unusually taciturn A difference is also manifest in the way they locate the pain or tenderness The honest subject places his finger directly on the spot and usually presses on it for a moment or longer, the malingerer points with a circular movement that includes quite a large area, seeming to avoid contact with the skin He may also writhe when the examiner touches him at all In such cases he should be blindfolded during the examination The honest man is anxious to know how soon he can get to work again while the simulator has no interest in this question The latter is also liable to refer several times to his "own doctor" It is unnecessary to warn against paying the slightest credence to what he says in regard to the statements of other doctors In conclusion, Klefberg reiterates the importance of diverting the attention away from the part alleged to be affected

The Journal of the
American Medical Association

Published Under the Auspices of the Board of Trustees

Vol. LXVIII, No 24 Chicago, Illinois June 16, 1917

TUBERCULOSIS AND WAR*

MAURICE FISHBERG, M D

Clinical Professor of Medicine University and Bellevue Hospital Medical College Attending Physician Montefiore Home and Hospital for Chronic Diseases

NEW YORK

The student of history is struck by the fact that disease and pestilence have always been more destructive factors in exterminating human life during war times than all ancient and modern firearms During previous wars, dysentery bubonic plague, cholera, typhus, typhoid smallpox, beriberi, etc , were the main war diseases Scientific camp sanitation, however, has succeeded in controling most of these pestilences But now new medical problems have been confronting the army medical services of the nations at war Among the last may be mentioned trench nephritis, epidemic jaundice, gas poisoning, the soldier's heart, and functional nervous diseases However, during the present European conflict the most important problem confronting the part of the medical profession charged with the prevention of disease is said to be the prevention of tuberculosis, which is alleged to be menacing the soldier in the field as well as the civil populations of the warring countries

Our present conception of the pathogenesis and prognosis of tuberculosis shows that this disease may be a factor during war as follows

1 While examining recruits for the army and navy, the problem arises at once, Should all who show signs of pulmonary disease be rejected?

2 Is active service in the field liable to wake up dormant tuberculous lesions?

3 Are soldiers and sailors excessively exposed to tuberculous infection?

4 What are the effects of war conditions on the incidence of tuberculosis among the civil population?

EXAMINATION OF RECRUITS

It is clear that those who present symptoms and signs of active and progressive tuberculosis will be easily recognized and eliminated The symptoms of the disease, cough, expectoration of sputum containing tubercle bacilli, fever, tachycardia, emaciation, etc, coupled with unmistakable physical signs, are sufficient in practically all such cases to show that the candidate is unfit for military service entailing great hardships But there are several classes of persons who are not so clearly differentiated Among them are to be mentioned (1) Those showing inconclusive symptoms and signs of lung lesions, (2) those who have been patients in sanatoriums or hospitals for consumptives and were discharged as cured, or with arrested disease, and (3) those having other pulmonary diseases, especially the various forms of bronchitis, asthma, emphysema, etc

The class of persons commonly known as "suspects" is apt to prove the *bete noire* of the military examiner, just as it has been to physicians in civil practice Among them are found persons who cough more or less, expectorating sputum which is microscopically negative, they may or may not have lost in weight recently, and perhaps give a history of anorexia, hemoptysis, etc , and state that some physicians have considered them tuberculous, while others disagree In fact, some will bring proofs that they have been under observation," or actually patients in tuberculosis clinics for months On physical examination there may be found some signs suggestive of a localized lesion in one of the lungs — some impairment of resonance, harsh, cogwheel or rude breath sounds, prolonged expiratory murmur, dry, or even moist rales, etc To reject all presenting these symptoms and signs would be unjust, because it is well known that only a small proportion of them are really tuberculous, while the vast majority are troubled with some nonspecific affections of the upper or lower respiratory passages which are not in the least disabling, and which may in fact be cured when the person is subjected to the regular life in a military camp

A few points which may prove useful in attempts at differentiation of these cases from those affected with active tuberculous disease are The examiner will be on safe ground if he relies more on symptoms than on physical signs, or even roentgenography In other words, it is best to investigate whether or not the person has fever, and if he has not, especially after some exertion, the chances of his being actively tuberculous are remote The pulse is another excellent indication as to the nature of the affection Active tuberculous disease with a pulse rate of less than 75 per minute is rather uncommon, and one with a pulse rate of less than 70 is extremely rare In doubtful cases we must study the stability of the pulse One suffering from active tuberculosis, even having a slow pulse, shows a pronounced increase in the rate after moderate exertion It may be stated that a pulse uninfluenced by exertion is an indication that the person examined is not affected with active tuberculous disease

Changes in resonance and in breath sounds, elicited over a limited area of the chest, if found anywhere below the third rib anteriorly, or the fifth dorsal spine posteriorly, are not of tuberculous origin, provided there are negative findings over the apexes Distinct signs of catarrhal conditions found over the lower parts of the chest, indicating pathologic changes in the bronchi or lungs, unilateral or bilateral, are almost invariably indications of nontuberculous disease, bronchitis, pulmonary emphysema, bronchiectasis, etc, or they may be the result of old and healed pleural adhesions

---

* Read before the New York Academy of Medicine May 15 1917

Of course, positive sputum is conclusive proof of active tuberculous disease But in the case of conscription, when the aim is the detection of slackers, it must not be lost sight of that there are many malingerers The sputum should be collected in the presence of some reliable person Borrowing sputum containing tubercle bacilli, or even buying it, is not unknown in civil life in New York There is no question that slackers may resort to this subterfuge

Those giving a history of having been patients in sanatoriums should not be rejected because of this fact alone My reasons are the following A large number have been cured, and participation in active warfare is no more liable to reactivate the tuberculous process than life in a large industrial city, and work in any industry, but few In fact, experience of medical men in the European armies during the present war has clearly shown that a large proportion of these persons get along very well, as well as other soldiers In England, Sir William Osler[1] says "I saw the history sheet of a man who had been for years in attendance at a tuberculosis dispensary with bilateral disease, but he slipped in, stood his training, and was actually sent to France" Dr Osler is of the opinion that some tuberculous persons may be taken into active field service In a recent paper, Dr G S Banks[2] speaks of a number of insured tuberculous subjects, formerly in receipt of sanatorium treatment, who have joined the military or naval forces Of sixty-four such persons, fifty-seven were on military and seven on naval service (mine sweeping)

> Of the total, 58 were suffering from pulmonary disease, and of these 34 had received sanatorium or hospital treatment for various periods One man actually enlisted while he was a patient in the tuberculosis wards of the City Hospital Out of the 64 who enlisted, 19 have recently been in active service—14 at the western front and 5 on mine sweepers Among 6 men discharged from the services, one had enlisted no fewer than three times before being finally discharged, and three had been discharged from one branch of the service and then enlisted in another

That these soldiers were not affected with the so-called "doubtful" or incipient types of the disease is shown by the fact that

> Out of 48 pulmonary cases, one was of the first, 12 of the second, and 35 of the third stage (Turban) Twenty of the 43 whose sputum had been examined gave positive results Of the 14 cases at the western front, of whom 3 were known to have had tubercle bacilli in the sputum, 4 were glandular, 10 pulmonary, and of the 10, 6 were in the second stage and 4 in the third From the fact that out of the 14 men accepted for foreign service only one had broken down in health, and that only temporarily, the conditions of life in the field are not unfavorable to the maintenance of the general health of the tuberculous patients if the disease is not active or advanced

Similar experiences have been recorded by French and German physicians Thus, Lanzenberg[3] insists that we must not reject all recruits presenting auscultatory signs of tuberculosis because of this fact alone

> The men in the active service and territorials were enlisted without any medical examination, and undoubtedly there were many tuberculous among them But the number who broke down among them owing to pulmonary diseases has been much smaller than we might anticipate in civil life. Moreover, it is well known that many who were discharged for these causes were malingerers In general, emaciated individuals have gained in weight and in many cases attained striking and surprising physical development, especially as regards the capacity of the chest, despite the rough conditions of life

He cites these facts in support of his contentions

> At the medical service of the Place de Paris, through which hundreds of wounded and convalescent soldiers pass daily, the physicians are often asked to change the services of injured or temporarily incapacitated soldiers, thus having been rendered unfit for the branch of the service to which they belonged In the vast majority of cases it is a question of transferring men from the infantry to the aviation or automobile corps These men are subjected to the minutest physical examination. My colleagues and myself in this service have been struck by the frequency with which the examination of the lungs reveals signs considered pathognomonic of tuberculosis Yet they have been for a year or eighteen months in active service in the field When they are asked as to how they withstood the hardships of the front, these men, almost always ignorant of the pathologic condition in their lungs, almost invariably answer that they had not been sick up to the day when they were wounded The interesting part of these facts lies not so much in the great frequency with which they may be observed, as in the conclusion they imply, namely, that the exclusion of all tuberculous patients and suspects would be an unjust measure which might deprive the country of many useful soldiers

The experiences of the German military medical service have been substantially the same Goldscheider[4] says that many of the suspects and doubtful cases of tuberculosis of military age have been placed on garrison duty, and most of them have later been found fit for active service Blömel[5] examined many soldiers who were rejected because of tuberculosis, and found that 80 per cent were nontuberculous Many had been patients in sanatoriums, and presented proofs to that effect He urges that

> On the whole, the fact that one was at one time an inmate in a tuberculosis sanatorium should not per se be sufficient to free him from military service, because a certain proportion, fluctuating between 8 and 15 per cent of sanatorium patients, were never *sick* with tuberculosis Furthermore, patients in the incipient stage of the disease, who make up 50 per cent of the population in some institutions, manifest strong tendencies to healing of the lesion in the lungs, and one to two years after their discharge they may be considered healthy

On this point Roepke[6] also agrees He says that clinically cured tuberculous subjects, who stand the training period well, may be sent to the front It is understood that the lesion has healed well Persons with stationary, closed tuberculosis may be utilized for garrison duty But active, progressive tuberculosis, even in the beginning of the disease, should be a cause for rejection It is mainly a difference between active and inactive cases

That sanatorium patients have often made good soldiers has also been found by many French physicians Burnand[7] says that in France

---

[1] Osler, William The Tuberculous Soldier, Lancet, London, 1916, **2**, 220

[2] Banks, G S Lancet London 1916, **1**, 323

[3] Lanzenberg, Armand Des tuberculeux et de leur situation militaire, Paris med, 1916, **6**, 2[illegible]

[4] Goldscheider Ztschr f Tuberk, 1915, **25**, 37

[5] Blömel Die Fehldiagnose Lungentuberkulose bei Beurteilung der Felddiensttauglichkeit, Med Klin, 1915, **11** 884

[6] Roepke Tuberkulose und Krieg, Ztschr f Medizinalbeamte, 1915 p 313

[7] Burnand R. Phthisie caseeuse guerie par un pneumothorax, Paris med, 1916, **6**, 168

> The present war has supplied a large number of examples showing the remarkable resistance of certain consumptives against the hardships of the campaign Many sanatorium patients responding to the urgent appeal to their patriotism escaped from the institutions and went to war during August, 1914 The majority have kept up very well under military life, even better than would be anticipated

He reports a case of acute progressive tuberculosis treated by artificial pneumothorax, the patient going to the front and doing very well Rist[8] reports a similar case, the patient reporting from the trenches periodically for refills of the pneumothorax

German physicians, reporting on the ability of exsanatorium patients to fulfil military duty during war time, believe that they thus prove the immense value of institutional treatment of phthisis Leschke[9] followed up the records of patients discharged from the sanatorium in Leipzig, and found that 241 were taken into active military service during the first year of the present war Of these, forty-four were sputum-positive on admission, and ten also on discharge, 187 were considered in the first, forty-eight in the second, and six in the third stages of the disease

Similar reports are available for the Austro-Hungarian, Russian and Italian armies Fagiuoli[10] observed many instances in which camp life seems to have given the finishing touch to a treatment started in institutions or at home, and the men, after remaining in the field for some time, are found healthy and free from any signs suggestive of active tuberculosis

Facts such as these, which can be multiplied considerably should dissipate our preconceived notions about the fitness of tuberculous patients for work, or for military service Many who have been treated in sanatoriums may be safely taken into the army, others with latent or even quiescent disease, provided the temperature pulse, respirations, etc, are around normal, should be given an opportunity to serve their country if there are no other valid reasons for rejection Considering that all soldiers are not immediately sent to the front, but must undergo a more or less long period of training, doubtful patients may be sent into the training camp, and if life under military conditions proves harmful, they may then be mustered out I feel confident that the proportion which will have to be discharged from a selected group of such former tuberculous patients will be comparatively small

We must bear in mind that a large proportion of patients in sanatoriums for incipient cases, and some even in hospitals for advanced cases, have never been proved tuberculous by the acid test — tubercle bacilli in the sputum in some institutions over 60 per cent are sputum-negative on admission It is an uncontrovertible fact that evidence to the effect that one was a patient in a sanatorium is not conclusive proof that he ever suffered from active tuberculous disease

A history of a previous attack of pleurisy, dry or with effusion, should not bar one from serving his country during war While it is true that the vast majority of pleurisies are tuberculous in origin, and a large proportion of these patients develop active phthisis in later years, still not all do develop the disease If otherwise found healthy, the average person who has passed through an attack of pleurisy is fit for military service It may incidentally be mentioned that phthisis developing after an attack of pleurisy is usually mild in character, and the prognosis is very good indeed

A former attack of pneumonia also should not be considered as a cause for rejection, if the patient has recovered and is otherwise healthy Not only is pneumonia etiologically not at all related to tuberculosis, but one who has survived an attack is no more predisposed to phthisis than the average of the rest of the population

Chronic bronchitis, pulmonary emphysema, asthma, bronchiectasis, etc, if the heart is found in good condition, and there are no disabling symptoms, such as dyspnea, tachycardia, loss of weight, etc, should also not be considered causes for rejection from military duty Indeed, the outdoor life, the regular hours, the nourishing food etc, of modern wars will be beneficial for most of the sufferers from these chronic diseases This same is true of almost all chronic pathologic processes of the upper respiratory tract

EFFECT OF ACTIVE SERVICE ON DORMANT TUBERCULOUS DISEASE

The facts just cited would seem to indicate that military service in the field is no more liable to reactivate dormant or quiescent tuberculous lesions than any other civil occupation requiring muscular exertion, walking exposure to the vicissitudes of the weather, etc Since we know that the vast majority of tuberculous patients may, and should, return to work as soon as the disease has been brought under control we cannot say that military duty is in all cases an exception Modern sanatoriums have of late realized this fact and have shown a tendency to put their patients to graduated labor," and some even just to work, and the percentage of recoveries is not lower than those attained in institutions in which perfect rest is indiscriminately enjoined, even though it is forgotten that the patients are thus encouraged to remain loafers after their discharge

One simple way to inquire into the problem is to find out whether or not army and navy life during peace times increases the morbidity and mortality from tuberculosis much above the proportion which might be expected in the male population between 20 and 30 years of age Of course, it must be borne in mind that during peace the men are carefully selected before admission and weaklings are rejected, while during war many who otherwise could not be enlisted slip in

It appears that the morbidity and mortality from tuberculosis in the European armies, in which the men are worked quite hard during peace time, has not been excessive, despite the fact that the soldiers and sailors are exposed to many of the factors favoring the development of tuberculosis as we understand at present the etiology of this disease According to Valery Havard,[11] the death rates in the armies during peace times have been as follows Great Britain (1909), 0 31, France (1907), 0 76, Prussia and Bavaria (1907), 0 20, Austria (1909), 0 45, Russia (1908), 0 58, Japan (1909), 0 34 In the United States Navy and Marine Corps the death rate averaged 0 58 for the years 1905-1906, for the years 1910-1911 it was 0 33 and 0 59, respectively For the three years 1909-1911, tuberculosis in our army caused annually 16 per cent of all the deaths from disease

---

[8] Rist E Presse méd 1914 **22**, 692

[9] Leschke Erich Die Tuberkulose im Kriege Munchen med Wchnschr 1915 **62** 363

[10] Fagiuoli Tuberculosi in guerra Gaz d osp 1916 **37**, 438

[11] Havard Valery Manual of Military Hygiene, New York 1914 p 47

For all adults from 20 to 29 years (men and women), the nearest class corresponding to the military age, tuberculosis caused 35 per cent. of all deaths (official census).

During war no material increase has been noted in the morbidity and mortality from tuberculosis, as far as historical records go. The present European war also has not shown, so far, any tendency in this direction. Thus Sir William Osler[1] states that

> Of 1,000,000 enlisted men between the ages of 18 and 40, the proportion to develop tuberculosis is probably much smaller than if these man had remained in civil life. The circumstances of the soldier's life, as a rule, do not weaken but strengthen the body's resistance.

Dr. Osler is quite emphatic on this question; he says:

> I do not think we are to look for a greater increase in the number of cases in the portion of the community which has undertaken military service. We are not going to double our tuberculous population, and are not to expect 70,000 deaths instead of 50,000 annually.

That Osler's prediction was correct is seen from an editorial published as late as Feb. 17, 1917, in the *Lancet*,[12] after the experiences in warfare had extended over two and one half years. Says that writer:

> Camp and trench life has not been productive of more breakdowns than would have occurred in civil employment. It is amazing that in a citizen army running to millions the incidence of breakdown from tuberculosis all told should have been only in the lower thousands. A rough calculation of breakdown from the same cause among the men of military age in industrial occupations would give a vastly higher total.

H. Hyslop Thomson[13] speaks in the same direction, and A. M. Fauntleroy,[14] of the United States Navy, after making careful medical and surgical observations behind the allied armies in France, reports that "tuberculosis of the lungs is of rather infrequent occurrence."

The German experience is not different. Goldscheider[15] says that, as far as he could ascertain from personal observations, the winter campaign at the western front caused an amazingly small number of cases of tuberculosis; other physicians inform him that this has also been their experience. He has not seen a single case of tuberculous infection. In a discussion on the subject before the medical society of Hamburg, Germany, August Predohl,[16] the historian of tuberculosis, stated that he found that tuberculosis has not increased among the soldiers in active service. Among 5,000 medical and surgical patients treated in the military hospital under his care, only eighteen showed symptoms and signs of active tuberculosis. In another hospital, Rassmann encountered only seventeen tuberculous among 3,000 soldiers. In Russia, Savvin,[17] having under his care 100,000 sick and wounded soldiers in the military hospital of Moscow, found that among 26,524 medical cases, not including those suffering from acute infectious diseases, the following number were affected with various pulmonary diseases of the respiratory tract: laryngitis and tracheitis, 181; bronchitis, 2,153; emphysema, 209; pleurisy, 636; fibrinous pneumonia, 197; catarrhal pneumonia, 411, and pulmonary tuberculosis, 955. Pulmonary tuberculosis was thus found in only 0.96 per cent. of the total number of patients; among those suffering from medical diseases (not from injuries) 3 per cent. were found tuberculous. The author advises that the last figures are in all probability the more correct, because in a surgical clinic tuberculosis is apt to be overlooked. He observed the significant fact that during the first few months of the war tuberculosis was more frequently found than during the later months, which points to the conclusion that many of those who were ill with the disease were ill before they were drafted. On this point most authorities agree. Grau[18] found on careful inquiry that in 39 per cent. of cases of tuberculosis the soldiers have suffered from the disease before they were drafted into the war; similar observations have been recorded by Moritz[19] and others.

How unlikely tuberculosis is to develop in soldiers on active duty is clear when we consider the rarity of surgical tuberculosis in wounded and injured soldiers. We know that tuberculous disease of the bones and joints frequently follows in the wake of injuries in civil life; yet it is extremely rare to find that contusions or wounds acquired in warfare have become tuberculous. On this point all authorities agree, though some cases have been reported during previous wars as well as the present war. Moreover, it was observed during the Franco-Prussian War that gunshot injuries to the lungs only rarely produced pulmonary tuberculosis.[20] Tonnissen[21] found in fifty-six lung injuries no case of tuberculosis; Roepke, Helm[22] and others confirm this from their own observations.

It thus appears that the life in the open air, the good and nourishing diet, the regular hours, and the removal of the deleterious features of city and industrial life of modern times, which the soldier enjoys, are rather of benefit, and outweigh the hardships which go hand in hand with active warfare in the battlefield. At any rate, tuberculosis is no more liable to develop in soldiers than in the civil population. It has also been observed that other diseases of the respiratory tract, such as pneumonia, bronchitis and tonsillitis, and also acute articular rheumatism are not excessively frequent.

EXPOSURE OF SOLDIERS TO TUBERCULOUS INFECTION

The foregoing shows clearly that there is no more danger of tuberculous disease in active army life than in civil life — perhaps even less than in many branches of urban and industrial life of modern times. When considering the problems of tuberculous infection, it must be borne in mind that recent research has clearly shown that the adult human being has almost invariably been infected before he reached adolescence, and that in adults infection hardly ever, if at all, coincides chronologically with the development of disease. Practically all who suffer from tuberculous disease have been infected during childhood, the virus remaining dormant for years, until some exciting cause reawakens the bacilli into activity, or reduces the natural resisting forces within the body, and the bacilli are permitted to multiply, producing active or progressive lesions It appears that over 90 per cent of civilized humanity have thus been infected, and exogenic reinfection with tubercle bacilli cannot take root On the other hand, endogenically, by metastasis, dormant lesions may become active and cause more or less serious disease To be sure, we know at present that privations, exposure to the inclemencies of the weather, injuries, overexertion and like adversities are often instrumental in reactivating the dormant virus, or in reducing the inherent immunity of the body, during warfare these factors are more likely to act than in civil life But it appears to be the fact that all these adversities have never been instrumental in increasing the tuberculosis morbidity and mortality, as is evidenced by the history of the wars of which we have reliable records, including the present one

---

[12] Tuberculosis and the War, Lancet, London, 1917, **1**, 268.

[13] Thomson, H. H.: Brit. Jour. Tuberc., 1917, **11**, 44.

[14] Fauntleroy, A. M.: Report on the Medicomilitary Aspects of the European War, Washington, Government Printing Office, 1915, p. 55.

[15] Goldscheider: Ztschr. f. Tuberk., 1915, **25**, 36.

[16] Predohl, August: Ztschr. f. Tuberk., 1915, **24**, 372.

[17] Savvin, V. W.: Russk. Vrach, 1917, **16**, 26.

[18] Grau, H.: Krieg und Lungentuberkulose, Ztschr. f. Tuberk., 1915, **24**, 351.

[19] Moritz: Ueber Lungentuberkulose im Kriege, Ztschr. f. ärztl. Fortbildung, 1915, **24**, 321.

[20] Kriegssanitätsbericht von 1870-71, **3**, 556.

[21] Tonnissen: München. med. Wchnschr., 1915, **61**, 89.

[22] Helm: Tuberkulose während des Krieges, Ztschr. f. Tuberk., 1915, **24**, 1.

All through history we find enumerated and carefully described the horrors of war, among which medical horrors played no small rôle In his exhaustive history of the epidemics resulting from wars, Prinzing[23] says

> Until comparatively recent times the most serious human cost of war has not been losses from disease in the armies, but losses from epidemics disseminated among the civil populations It was the war epidemics and their sequelae, rather than direct military losses that accounted for the deep prostration of Germany after the Thirty Years War Such epidemics were also of the gravest consequences of the Napoleonic Wars

It is noteworthy that in the descriptions of the diseases affecting armies in the field in Prinzing's work, as well as in various old and recent books and monographs on military hygiene, hardly any mention is made of tuberculosis as a factor during or after wars We find details of dysentery, typhus, typhoid fever, smallpox, beriberi, bubonic plague, cholera, etc, and in more recent books, like that of Arthur F Hurst's,[24] on trench nephritis, epidemic jaundice, gas poisoning, soldier's heart functional heart disease, etc, but no mention is made of tuberculosis

It cannot be said that there has been a conspiracy among medicomilitary writers, historians and observers to ignore the factor of tuberculosis in war There is no doubt that if tuberculosis were actually an appalling war menace it would have been observed and recorded, surely during the Civil War in this country the Franco-Prussian War of 1870 71, the Russo-Japanese War of 1905 and the first two years of the present war, it would not have been overlooked I therefore believe that I am safe in concluding that tuberculosis is not more likely to occur in soldiers during active warfare than in civil life

That the cases occurring in the armies are not necessarily due to infections in the barracks and trenches has been proved in another way Osler[1] puts it tersely when he says that "in the majority of cases the germ enlists with the soldier" Monckenberg[25] performed necropsies on eighty-five soldiers, and found tuberculous lesions in twenty-seven, or 31 76 per cent In only five cases could tuberculosis be considered the cause of death, while in the rest it was only an incidental finding He considered tuberculous only those lesions which showed caseous and calcareous changes of the lungs, pleura or thoracic glands, while scars of the lungs or pleura, even when localized in an apex, were not counted Had he counted the latter changes, because they are undoubtedly tuberculous, he would have found over 90 per cent of tuberculosis, as has been recorded by others Schroeder,[26] from observations of German soldiers during the present war, emphasizes that exposure to tubercle bacilli plays no significant role in the causation of active tuberculosis in the German army He has not seen a case of primary tuberculosis acquired in the campaign The same has been recorded for the English and Russian armies, as has already been mentioned

EFFECTS OF WAR CONDITIONS ON THE INCIDENCE OF TUBERCULOSIS AMONG THE CIVIL POPULATION

Viewing the problem from any angle, it appears that we cannot look for any change in the tuberculosis morbidity and mortality among the civil population because of the war The hardships to be sustained by the dependents whose breadwinners will be drafted into the army will undoubtedly be significant from an economic standpoint, the increased cost of living will increase these hardships But as far as can be ascertained among the European belligerent nations at present, it appears that the morbidity and mortality from tuberculosis has not increased during the past two years As already mentioned, no previous war has increased the tuberculosis morbidity and mortality As has been shown by Reiche,[27] in Hamburg, where excellent vital statistics have been kept, no increase in the tuberculosis mortality occurred during and after the Franco-Prussian War of 1870-1871 The same was true in the United States after the Civil War

It appears, however, that in France there have lately been issued urgent appeals for funds to help the *invalides blessés par la tuberculose* — wounded by tuberculosis — as L Landouzy[28] has called them From a careful inquiry into the facts as presented in the appeal, it seems that while there are many thousands of soldiers who had to be mustered out because of tuberculous disease, the proportion is not higher than could be expected among men engaged in industrial pursuits For instance, it has been shown that there are about 100,000 tuberculous ex-soldiers in France at present This number is undoubtedly appalling But when we consider that there have been about 6,000,000 or perhaps more soldiers engaged in this war fighting for France, the percentage is no higher than could be expected under any circumstances among people living under modern conditions The urgent call for the control of tuberculosis was not heeded in France before the war with the same energy as it was in other countries, as England, Germany and the United States Now that the invalided soldiers who valiantly fought for their country need relief, the French begin to feel that something must be done

Indeed, figures published by Renon[20] show clearly that tuberculosis has not increased among the civil population of France since the war began The tuberculosis mortality rates, despite the lack and excessive cost of food, have apparently not changed "The war has had no effect at all, judging by vital statistics, hospital and private practice," as Rénon puts it There is no reason to believe that conditions in this country will be different

---

[23] Prinzing Friedrich Epidemics Resulting from Wars Oxford 1916

[24] Hurst A. F Medical Diseases of the War London 1917

[25] Monckenberg Tuberkulosebefunde bei Obduktionen von Kombattanten Ztschr f Tuberk 1915 **24**, 33

[26] Schroeder S Betrachtungen uber die Tuberkulose zur Zeit des Krieges Ztschr f Tuberk 1915, **24**, 337

[27] Reiche Ztschr f Tuberk 1915 **24**, 372

[28] Landouzy Le guerre et la tuberculose Paris méd 1916, **6**, 59

[29] Renon Louis La defense sociale contre la tuberculose pendant la guerre Paris méd 1916 **6**, 64

RECAPITULATION

The medical history of wars shows that the incidence of tuberculosis among soldiers and noncombatants has not been more excessive than could be expected normally among persons of military age The morbidity and mortality from this disease have not increased during and after former wars It is not to be expected, therefore, that during the present war the number incapacitated by tuberculosis among the nations at war should increase In fact, available evidence, published by those who, because of their exceptional opportunities for observation of soldiers in the field, are competent to express an opinion on the subject, shows clearly that tuberculosis has not changed the rates of morbidity and mortality in England, France, Germany, Italy, Russia and other countries The large number of tuberculous men among the veterans is only absolute, when considered in relation to the large number of the men engaged in the battlefield, the proportion is quite small

In evaluating the fitness for military service, examiners should not reject persons because of history of past attacks of tuberculosis, or of having been patients in sanatoriums A substantial proportion of sanatorium patients have never been sick with phthisis, a larger proportion have been affected with the abortive form of the disease and have completely recovered, and many who had suffered from the chronic forms of phthisis recover to such an extent as to be considered completely cured and fit for any task, including military service Only symptoms of active disease, especially fever, tachycardia, dyspnea, emaciation, excessive cough and expectoration should be considered causes for rejection The experiences of military physicians and others in the field in Europe have demonstrated that many soldiers who had suffered from tuberculosis before the onset of the war have made brave and good warriers, and have returned from the field healthier than when they enlisted for service Nor has it been observed that active military duty is more liable to reactivate latent or dormant tuberculous processes, many affected with quiescent disease have done well

The problem of tuberculous infection of soldiers need not be considered seriously Despite the large number of tuberculous soldiers in the European armies, those entitled to an opinion have not seen cases of tuberculous infection acquired while serving during the present war The reason is known at present Most adults have been infected with tubercle bacilli during childhood, and have thus been immunized against exogenic reinfection with the same virus, and they are just as safe in the army as in civil life In the vast majority of tuberculous cases discovered among the soldiers, it was ascertained that they had been affected with the disease before enlistment Reactivation of old, dormant lesions occurs in civil life, it is doubtful whether it is more likely to occur in military life

57 East Ninety-Third Street

THE CONTINUOUS BATH IN MENTAL DISEASE *

EDWARD A. STRECKER, M D
WEST PHILADELPHIA, PA

The value of the prolonged neutral bath for producing quiet and sleep in certain nervous conditions, hysteria, mild excitements and anxiety states has long been recognized Brierre de Boismont in France, and Scholz in Germany employed a modified continuous bath for excited patients many years before Kraepelin's observations and emphatic approval brought this method into more or less general use More than seventy years ago Dr Isaac Ray visited the important hospitals for the insane in Great Britain, France and Germany, and the following reference is gleaned from his tour notes "Nothing seems to be so much relied on, especially in France, for subduing inordinate excitement, as the warm bath protracted for an hour or two"[1]

About twenty years ago, Kraepelin noticed that confused, restless and debilitated patients were greatly benefited by several hours spent in a warm bath He gradually increased the treatment time to an entire day, and finally the unsatisfactory condition of his excited patients during the untreated or night period led him to attempt the experiment of a really continuous or *Dauer-bad* Patients are now frequently kept in the baths for weeks, or even months, without any untoward results[2]

THE CONTINUOUS BATH ROOM

The chief requisites for the treatment room are ample space, sufficient light and air, and mechanical facilities for the shutting off of sound communication with the outside world There are in the Pennsylvania Hospital for the Insane two large sunny bath rooms, each containing three extra size tubs, and equipped with heavy plate glass double windows and doors, and ventilating devices With the doors and windows closed, the rooms are practically sound proof The temperature of the water is controlled from a temperature table, and the nurse, who is in constant attendance, takes half hour readings from an ordinary bath thermometer The patients are clothed in a loose fitting, one piece garment, permitting great freedom of movement There is an observation window facing the the hall through which every part of the bath room can be readily be seen An electric button enables the attending nurse to signal for assistance in case of emergency

The continuous bath room of the future will probably be developed along somewhat more esthetic lines Since certain patients are under treatment for many hours, days and sometimes weeks, the room must necessarily be used not only as a bath, but also as a living apartment The introduction of books, magazines, a few games and puzzles, and possibly a picture or two on the walls, will perhaps help to modify its rather monotonous appearance There is also a distinct need for more individual bath rooms, in which certain types of patients, who are either annoying to others or themselves easily disturbed, may be placed under treatment Partial segregation may be accomplished by the use of screens

---

* Based on a contribution by the author to Dr J Hendrie Lloyd's article 'The Modern Treatment of Insanity,' in Musser and Kelly Practical Treatment Volume IV

[1] Ray Isaac Observations on the *Principal Hospitals for the Insane* in Great Britain, France and Germany, Am Jour Insan April, 1846

[2] When the time of the bath is protracted beyond the usual period but does not exceed two hours it is generally spoken of as 'prolonged' When it occupies more than *two hours* it is referred to as 'continuous'"

PHYSIOLOGIC EFFECT OF THE CONTINUOUS BATH

The effect of the *Dauer-bad* on the physiologic processes of the human economy is but little understood Our own observations of the body temperature, pulse rate and respirations, recorded over a period of six months, showed practically no variations from the normal The blood pressure is not essentially influenced There is some experimental and considerable empiric evidence to prove that the continuous bath acts as a mild hypnotic agent, and that unlike drugs, it induces physiologic fatigue without the sacrifice of mental capacity Busch and Plant[3] tested a series of normal persons in a prolonged bath, lasting two hours and given at a temperature of 35 C (95 F) There was no decline of physical endurance or of mental functioning, although a general feeling of tiredness was produced, extending over a period of several hours Adler[4] demonstrated an average reduction of 750,000 red cells in the blood count As all his patients presented a polycythemia associated with cyanosis, which was markedly improved by the ten hour bath a redistribution of the surface circulation is suggested It is extremely likely that the excretory function of the skin and kidneys is stimulated This is an exceedingly important consideration, as a large percentage of patients, for at least a week following admission, present problems principally of checked secretional activity

EFFECT OF THE CONTINUOUS BATH ON STATES OF MENTAL EXCITEMENT[5]

The estimate of just how much any isolated therapeutic measure contributes toward recovery from such a complex pathologic condition as is presented by insanity must of course be purely speculative It would be unfair and incorrect to say that the continuous baths cure or even definitely shorten the course of any psychosis That they constitute an extremely valuable and efficient method of controlling excited states cannot be denied Probably the best results were obtained in conditions of confusion and restlessness, frequently associated with considerable physical debilitation The infective-exhaustive group furnishes a good illustration of this type After five or six hours in the tubs the majority of such patients became quiet and drowsy, and often fell into a sound slumber shortly after being placed in bed Some clinicians advocate sleeping in the tubs, we feel that when a somnolent state is reached, transference of the patient to bed is desirable

Abnormal mental exhaustion is closely simulated by extreme bodily fatigue, and while in the latter, Nature readily supplies the sovereign remedy, namely, sleep, in the former it must be produced by some artificial method, as the pathologic condition of the nerve system precludes the possibility of a normal response to physical weariness Hypnotic drugs given in doses sufficiently large to be effectual are chiefly objectionable because they place an additional burden on the already overtaxed excretory system Moist packs are unsatisfactory principally on account of the resistance they offer to the motor restlessness, which is such a frequent accompaniment of the apprehensive, confusional state On the other hand, the continuous bath relies for its therapeutic value solely on water, a nonresistant medium which favors rather than retards excretion, and whose action approximates the physiologic steps between the production and onset of normal fatigue and sleep, in that it is gradual and sedative rather than rapid and hypnotic

The manic phase of manic-depressive insanity responds to the continuous bath in something more than half of all cases With some observers the experience has been that the excitement is allayed only during the treatment time, and then continues as before In frank mania the brain is in some sense comparable to a highly sensitized receptive plate, which is receiving an endless flow of stimuli from the environment through the route of the special senses, and is attempting to react to them in terms of psychomotor and vocomotor activity Just what percentage of the sensory stimulations are referable to the tactile sense, and what proportion of the latter finally finds expression in ideas and spoken words and movement, is of course a matter of pure conjecture It seems reasonable, however to say that the continuous bath, at least, reduces the sum total of accidental and other surface contacts to a fairly low level It dispenses with the irritation arising from constricting clothing and surrounds the body of the patient with water a medium whose physical characteristics, especially the temperature can be artificially maintained at a constant and uniform degree Thus a nonirritating sheath is interposed between a large area of the skin surface and touch-contact with the environment Wholly apart from the possibility of a directly favorable therapeutic result is the important consideration that in the baths the destructive tendencies of maniacal patients are checked, and the distressing untidiness becomes a much less serious factor in the management of the case

In dementia praecox the baths were employed mainly for the relief of the episodic excitements of the catatonic form, in which they were moderately successful, and to combat various vasomotor disturbances in which their effect was highly beneficial Not only was cyanosis improved, as Adler demonstrated, but the tendency to coldness and sweating of the extremities, oiliness and coarsening of the skin texture, and in one case, marked dermographia were all much lessened In paresis the baths are valuable not only in controlling the disturbed periods, but also in maintaining an active, healthy condition of the skin, which especially in the late stages of the disease is prone to trophic degenerations The most unfavorable cases for tub treatment are the apprehensive, agitated states which occur in the involutional and presenile depressions and the senile dementias Gross[6] found that apprehension dictated by delusions was made worse Although the *Dauer-bad* is probably the best and most rational method of controlling excited mental states, yet it should never be regarded as a specific remedy It may possibly have some effect in shortening the course of restless, confusional states of infective-exhaustive origin, but here again too many factors are operative, and an accurate estimate of each remedial measure is clearly impossible

---

[3] Busch and Plant Allgemeine Therapie der Psychosen von A. Gross in Aschaffenburg s Handbuch der Psychiatrie Part 4 p 144

[4] Adler H M and Ragle E. H Note on the Influence of Hydrotherapy on the *Red Blood Cell Count* in the Insane Contributions from the Psyhcopathic Hospital 1913, p 67

[5] *Based on observations* covering a period of three years during which time about 300 patients exhibiting various kinds and degrees of mental excitement, were treated *in the continuous* bath

[6] Gross A Allgemeine Therapie der Psychosen Aschaffenburg s Handbuch der Psychiatrie Part 4 p 148

ADVANTAGES OF THE CONTINUOUS BATHS

The selection of a method for the control of the excitement factor in both acute and chronic mental disease is practically limited to the employment of hypnotic drugs or the use of various hydrotherapeutic agencies. When we consider that the disturbed periods are a matter not merely of hours or days, but of weeks or more often months, the principal objection to drug restraint at once becomes manifest. In every field of medicine it is now a clearly established principle that resort to hypnotic drugs is purely a temporary measure, and that unless the condition under treatment is both hopeless and chronic, their continued use must be regarded as both dangerous and unscientific.

Of the remaining hydrotherapeutic possibilities, exclusive of the continuous tubs, the hot and cold moist packs are perhaps most representative. They have two rather serious objections, in that the temperature cannot be definitely controlled, and even more important, they include the element of mechanical restraint. In the majority of cases, continuous tub treatment is easily the method of choice. It requires less preparation and may be continued for longer periods of time. The temperature of the water may be readily varied and can always be ascertained to the exact degree. The body is effectively cleansed, an important consideration in untidy patients. A wide range of motor activity is permitted under the best conditions, which probably contributes materially to the production of normal fatigue and sleep. No restraint is necessary, and to use it is to defeat the purpose for which the bath is given. If mechanical means are required to keep a patient in the tubs resort would better be had to some other form of treatment. Furthermore, as no device, however carefully tested, can be regarded as perfect in its operation, there is always the danger of an inflow of dangerously hot water to be considered. An unfortunate instance in which the patient was scalded to death, probably because she was mechanically prevented from leaving the tubs, has recently been reported.[7]

UNTOWARD EFFECTS AND CONTRAINDICATIONS TO CONTINUOUS TUB TREATMENT

The untoward effects of bath treatment in properly selected cases were practically nil. At times there were fleeting vasomotor disturbances usually manifesting themselves as deep flushings of the face and chest. They disappeared after a short time and apparently had no especial significance. Occasionally we have noted ephemeral rashes and skin exfoliation. Anointing the body with lanolin has been advised. Gross[8] observed an epidemic of furunculosis among the patients using the same bath room, which abated only after the use of the room was discontinued. We have had several cases of discharging ear, usually a canal furunculosis, following the baths, and are now trying the plan of plugging the ears with cotton saturated with liquid petrolatum. Probably thorough drying of the ears is the most important prophylactic measure. Kraepelin regards any existing ear disease as a contraindication. Most clinicians interdict the baths during the menstrual period. After the menses have been well established, however, there seems to be no good reason why a greatly excited patient should not be given moderate tub treatment. Advanced cardiac and pulmonary disease constitute prohibiting conditions, but even markedly arteriosclerotic patients have not shown any ill effects.

A PLEA FOR THE WIDER USE OF BATH TREATMENT

Perhaps the fact that the continuous baths were first employed in mental disease and have found their most general application in this field has led to their neglect in the treatment of certain other conditions, which although not generally classed as insanity, nevertheless present similar problems. Patients with delirium tremens, for instance, are generally referred to the general hospital, where the method in vogue is usually mechanical restraint plus hypnotic and stimulating drug therapy. Alcoholic delirium is essentially a toxic psychosis in which the psychomotor excitement, although more intense, does not differ materially in its characteristics from that of the deliriums of certain fevers, of high grade infective-exhaustive states and of so-called "delirious" mania. There is, in all, the same imperative need of rapid and free elimination to reduce the toxicity and sleep to prevent exhaustion. Hypnotic drugs not only are frequently ineffective, but if they are to succeed at all, must be given in large and dangerous doses. At the Boston Psychopathic Hospital,[9] ten unselected patients with delirium tremens were treated in the continuous tubs with the addition of moist packs and eliminatory measures, without a single fatality. Fifty cases selected at random in series of ten from five general hospitals, in which the method used consisted of mechanical restraint, hypnotic and stimulating drugs, showed a mortality of 26 per cent. In this connection it may be remarked that in several instances we have found the prolonged bath a valuable adjunct to the Lambert-Towne treatment in helping to combat the marked restlessness, which commonly makes its appearance on the second day.

On the family physician, who generally first sees the acute mental case, devolves the exceedingly difficult problem of caring for the patient during the longer or shorter interval which precedes admission to the hospital. Certain of the objective manifestations of acute insanity, insomnia, motor restlessness and vocal activity appeal to the laity in the light of fundamental disorders of the mind, and there is a naive but insistent clamor for an immediate exhibition of the magic hypodermic, which will soothe the troubled spirit and produce sleep. The physician cannot well avoid the moderate employment of hypnotic drugs, but he can limit their use by resorting to other measures. A prolonged and even a continuous bath can be safely given in an ordinary bath tub, provided an efficient nurse is in attendance. Mental disease in itself is serious enough without the addition of a complicating drug toxemia.

A few cases of "postoperative mania" suggest that continuous tub treatment is frequently a practical method of caring for the surgical patient who develops acute mental symptoms. If there is actual danger of mechanical violence to the wound, the principle of nonrestraint may have to be sacrificed as the lesser of two evils. The active, untidy surgical and mental patient is under infinitely better conditions in the bath, in which comparative asepsis can be maintained without great difficulty, than when confined to a room in which even the most diligent care cannot prevent a septic environment The bath has been repeatedly recommended for the decubitus which is often a serious feature of the late stages of paresis I have seen an obstinate ulcer of the foot on which the usual medication, and even repeated scarification, made no impression yield readily to a continuous bath of physiologic sodium chlorid solution

---

[7] White, William: Dangers of the Continuous Bath, Am. Jour. Insan., January, 1916, p. 481.

[8] Gross, A.: Allgemeine Therapie der Psychosen, Aschaffenburg's Handbuch der Psychiatrie, Part 4, p. 146.

[9] Gregg, Donald: The Treatment of Deliria in General Hospitals and in Hospitals for the Insane, Contributions from the Psychopathic Hospital, 1913, p. 65.

Perhaps the principal disadvantage of the baths is their cost, both as to installation and operation Furthermore, the intensive nursing required is a matter of considerable expense Careful and intelligent care, before, during and after the bath, is the only certain method of avoiding accident and of realizing the fullest possible value of the treatment Probably if the amount saved under the conditions of the bath in caring for the untidy and destructive patient, could be computed, the importance of these factors would be materially lessened

CONCLUSION

It seems conservative to assert that the continuous bath is the most satisfactory method we have of treating the fairly large group of excited states which are encountered in many of the psychoses

Pennsylvania Hospital for the Insane

DEVELOPMENTS IN THE PARAFFIN TREATMENT OF BURNS AND OTHER OPEN WOUNDS*

TORALD SOLLMANN, M.D
CLEVELAND

Further experience in the laboratory and reports of clinical applications are showing pretty clearly that some of the current endeavors in the paraffin treatment of burns are proceeding in directions that are not likely to lead to improvements, they have also indicated the directions in which further experimentation is desirable, and have already led to certain improvements that appear of sufficient practical importance All of these considerations may justify the publication of this note

PHYSICAL CRITERIA

The important qualities of paraffin for burns, as mentioned in my previous paper[1] and in that of Leech[2] are the properties of pliability, ductility, low degree melting point, hardness and adhesion I should be inclined to rate the importance of these properties in the order given, but all the properties must be within certain limits

I have devised methods for testing these properties These were described in the paper of Leech They do not entirely eliminate the personal factor, but they are sufficiently quantitative for practical purposes, and are so simple that they can be easily applied The factor of adhesion has not yet been measured quantitatively, but is probably of slight practical importance

The Addition of Other Waxes, Etc, to Paraffin — In my previous paper, I expressed the opinion that simple paraffin would accomplish everything that could be accomplished by any of the mixtures, and that the most promising direction for improvement would be in the choice of the paraffin itself, rather than in additions Further experience has established the correctness of these predictions There has now been considerable experience with simple paraffin, and with various mixtures[3] This has shown that they are clinically indistinguishable A review of my own data on the effect of other waxes added to paraffin shows that the essential properties were not improved by such additions, except that asphalt does make the waxes a little more adherent[4]

The addition of rosin which is advised in so many of the published formulas (evidently because of the misleading statements concerning the composition of "Ambrine"), is distinctly detrimental The rosin appears insoluble in paraffin, and therefore never makes a good mixture The addition of oils lowers the melting point, but practically destroys the ductility and pliability

The effects of the various additions are deduced from my first pages as follows

Asphalts sometimes improve pliability and ductility and lower melting point

Naval pitch improves pliability, not ductility, and raises the melting point

Rosin raises the melting point and diminishes ductility, but has no effect on pliability

Beeswax spermaceti stearic acid linseed oil, Venice turpentine olive oil castor oil theobroma and Japan wax raise the melting point, and diminishes ductility and pliability

Petrolatum diminishes pliability and ductility, but makes no change in the melting point

Liquid petrolatum[5] lowers the melting point and diminishes ductility and pliability

PHYSICAL IMPROVEMENTS IN PARAFFIN

The paper of Dr Leech shows that several refineries produce paraffins that surpass greatly for these properties the ordinary pharmacopeial paraffin A glance at his paper shows those brands that are most useful I am of the opinion that paraffins intended for the treatment of burns, etc, should comply with certain specifications as follows

Paraffin for Films —Paraffin for use on burns, etc, should be solid, but more ductile and pliable than the official paraffin, and have a rather lower melting point When intended especially for this purpose, it should be liquid at or below 50 C, a thin film, when prepared and tested by the methods described in the paper of Dr Leech, should be pliable at 28 C, and ductile at 31 C

I would recommend that in future only paraffins complying with these specifications be used in the treatment of burns A number of these are enumerated in Leech's paper, and apparently there is no difficulty in refineries producing other brands should they be desired I believe that these should have the preference over the more complicated and rather inferior mixtures, whether these are proprietary preparations or published formulas, unless a definite advantage can be shown for the latter As I have previously said, all the experience I have gathered goes against any such advantages, and I consider experimentation along that line as entirely unpromising For cosmetic purposes, it may be advantageous to give a flesh tint to the paraffin, by the addition of a trace of scarlet red or sudan

---

* From the Pharmacological Laboratory of the Western Reserve University School of Medicine

[1] Sollmann Torald Suggested Formulas for Paraffin Films The Journal A. M. A. April 7 1917 p 1037

[2] Leech P N Ambrine and Paraffin Films The Journal A. M. A. May 19 1917 p 1497

[3] The clinical applications were made by Dr J R Beiter of Canton, Ohio who expects to report his observations in more detail

[4] Dr Leech and I have both noticed that the addition of even traces of asphalt to paraffin greatly lowers its surface tension so that when the melted mixture is poured on warm water it forms a thin, even film whereas simple paraffin tends to collect into rather thick drops

[5] The brand of liquid petrolatum used throughout these experiments was Stanolind Liquid Paraffin

ADDITION OF ANTISEPTICS, ETC

A number of the published formulas contain added antiseptics, such as resorcin, betanaphthol, epithelial stimulants like sudan red, and aromatic oils like eucalyptol The last is added confessedly as a mere perfume, and doubtless performs that purpose to some degree The others — the antiseptics and stimulants — must be absolutely useless Solid paraffin is used familiarly as a hermetic seal for chemicals It has been found perfectly successful for that purpose, and it does not lose its efficiency when the substance is incorporated with it In other words, the film of solid paraffin encloses the added antiseptic, etc, tightly and nearly as hermetically as if it were inclosed in a rubber bag Only an infinitesimally thin layer at the very surface can diffuse into the wound

I have shown this by adding resorcin or phenol to melted paraffin, and pouring this in films of about 2 to 3 mm thickness The films were then immersed in water

With resorcin, 0 2 per cent, in paraffin [6] (0 2 per cent in paraffin, 2 parts, liquid petrolatum, 1 part), after five days the water contained no trace of resorcin

With 1 per cent phenol (carbolic acid) in paraffin In two and a half hours there was a very faint trace, which did not increase in five days The wax when melted with water showed an abundance of phenol

LIQUID-SOLID PARAFFIN SEQUENCE

Perhaps the greatest difficulty in the use of the paraffin treatment is in the application of the first coat of the melted paraffin This is apt to be painful if the paraffin is at all overheated — and this is often difficult to avoid in practice The use of a brush with melted paraffin is apt to be somewhat painful, and spraying apparatus for melted paraffin are not very satisfactory

We have found that these disadvantages can be avoided by applying for the first coat liquid petrolatum in place of the melted paraffin

Otherwise, the application is quite as usual The cotton film is laid on the liquid petrolatum, then the melted paraffin is painted over the cotton, etc [7]

Clinically, this method is highly satisfactory The liquid petrolatum is entirely painless, and protects the wound against excessive heat from the melted paraffin The liquid petrolatum could be easily applied with an ordinary oil atomizer However, this is not at all necessary, a thin layer being easily applied with a cotton swab Dr Beiter expresses himself as especially enthusiastic over this modification

Use of Antiseptics, etc, with Liquid Petrolatum— The use of the liquid petrolatum for the first coat has the further advantage that it promises the effective application of anesthetics, antiseptics or stimulants to the wound These would simply be dissolved in the liquid petrolatum (or if insoluble in this, in olive oil) I have not yet given this method a clinical trial, but have worked out a series of solutions which are very promising These will be enumerated in the next section, so that they may be tried more extensively, and in this way any improvements in the treatment of burns may be hastened It is scarcely necessary to call attention to the fact that under the present circumstances prompt improvements in these directions would be especially desirable

COMPARISON WITH OTHER METHODS OF TREATMENT

Almost all surgeons who have had occasion to employ the paraffin treatment express themselves with various degrees of enthusiasm as to its advantages over the older methods of treatment However, no exact comparisons have been published, so that it is difficult to say how much, if any, of the present enthusiasm is due to novelty It would be desirable that actual comparisons be made between these methods, by those who have the opportunity and sufficient interest Such experiments are already being started by several workers, but their value is likely to be proportional to the number of workers engaged, again, especially because early results are particularly valuable

I subjoin a list of comparisons that seem to me especially desirable

I would suggest either plain paraffin, or the liquid-solid paraffin sequence as a standard of comparison This would be applied, together with the methods to be compared, to adjacent or contralateral areas If applied to adjacent areas, the wound should be divided by imaginary lines into zones about 2 inches wide (oriented by marking the skin outside of the wound) It is important that the methods applied to the same patient should not be so numerous as to interfere with the practicality of the application If it is at all possible, photographs should be taken

LINE 1—*Local Anesthetics*—This appears one of the most promising improvements I would suggest that the following be tried out, generally dissolved in liquid petrolatum, and applied by the liquid-solid sequence

Chloretone, from 1 200 to 1 1,000 (soluble in about 200 parts of liquid petrolatum)
Orthoform New, a 1 per cent. suspension made by dissolving the orthoform in a little alcohol and shaking with olive oil The orthoform is but little soluble in either liquid petrolatum or olive oil
Camphor, from 1 100 to 1 20 (it is completely soluble in 20 parts of liquid petrolatum, incompletely in 10 parts)
Menthol, 1 10 (completely soluble)

LINE 2—*Antiseptics and Epithelial Agents*—These may have a field, especially in the later stages, or with slowly healing ulcers I would suggest the following

Eucalyptus oil, 2 per cent (completely soluble)
Resorcin, 1 per cent in olive oil (nearly insoluble in liquid petrolatum)
Betanaphthol, 1 400, dissolved in a little alcohol and shaken with liquid petrolatum (it is nearly insoluble in liquid petrolatum)
Gentian violet, 1 5,000 suspension (dissolved in a little alcohol and shaken with the liquid petrolatum, it is nearly insoluble in liquid petrolatum)
Scarlet red, 0 5 per cent suspension in liquid petrolatum (only slightly soluble)

LINE 3—*Comparison of Paraffin with Astringents and Washes*—This and the following represent comparisons of the new with the older methods, to arrive at a definite judgment of their relative advantages

Picric acid, saturated solution
Solution of aluminum acetate, N F, diluted ten times
Boric acid, 2 per cent
Sodium bicarbonate, 2 per cent.
Lime water
Magnesium sulphate, 5 per cent
Potassium sulphate, 1 per cent
Tincture of myrrh, diluted with 8 parts of water

---

[6] In these experiments, the "Parowax" brand of paraffin was used

[7] It would probably be a considerable convenience if manufacturers of absorbent cotton would market for this purpose rolls consisting of single layers, of the proper thickness, and about 6 inches wide

Line 4.—*Comparison of Wax Treatment with Other Fatty Methods.*—

Petrolatum applied on gauze.
Fisher gauze and cotton.
Liquid petrolatum gauze and cotton.
Carron oil on cotton. Cotton film, paraffin and cotton.
As the preceding, sesame oil being used in place of linseed oil in making the lime liniment.

Line 5.—*Comparison of the Waxes.*—While present experience does not incline me to attach much importance to modifications of the paraffin by the addition of other waxes, any one interested in this phase of the subject may find the following most promising:

Paraffin[8]
Paraffin with Texas asphalt, 1 per cent.
Paraffin with spermaceti, 10 per cent., or paraffin stearic acid, ten per cent.
Paraffin with theobroma, 10 per cent.
Paraffin with liquid petrolatum, 10 per cent. (paraffin 90, liquid petrolatum[8] 10).
Paraffin with liquid petrolatum, 33 per cent. (paraffin 67, liquid petrolatum[8] 33).
Formula published by Leech:

Paraffin (M. P. by U. S. P. method 47.2 C.)	97.5 gm.
Asphalt varnish	from 3 to 5 drops
Olive oil	1.5 c.c.

CONCLUSIONS

Several refineries prepare paraffins of low melting point that are superior in their physical properties to any of the mixtures on the market.

The addition to paraffin of waxes, resins, etc., as also of antiseptics, etc., is superfluous.

Further improvements are not to be sought along these lines.

The difficulties of the paraffin method are greatly reduced by employing liquid petrolatum instead of melted paraffin for the first coat. Further improvements may be attempted by the addition of antiseptics, stimulants, and especially anesthetics to the liquid petrolatum of the first coat.

Systematic comparison of these improved methods with the older methods is desirable.

PARAFFIN IN THE TREATMENT OF WOUNDS AND BURNS

OBSERVATIONS ON VARIOUS PREPARATIONS

J. R. BEITER, B.L., M.D.
Surgeon United Alloy Steel Corporation
CANTON, OHIO

The successes claimed for "Ambrine" in the treatment of burns promised a large field in industrial accidents and therefore prompted extensive trials. Owing to my inability to obtain "Ambrine," various paraffin compounds were used — formulas containing eucalyptus, resorcin, betanaphthol, resin, cera flava, olive oil, and scarlet red, in ordinary paraffin. My series of cases represents over 4,000 wax dressings on every conceivable burn, and many lacerated wounds.

Prior to the employment of the wax treatment of burns we had employed the usual methods — various ointments, various aqueous solutions, the bath treatment, exposure to the air, and picric acid.

Our technic in the use of waxes was as follows: All burns were carefully cleaned at our emergency hospital by well trained men, any blebs were opened, and all the skin that could be taken off with ease was removed. The burned area was dried either by exposure to air or by gently wiping the surface with cotton pledgets dipped in ether. Over the involved area a thin film of the wax was painted. (The wax is kept constantly in a water bath, so that it is at all times ready for instant use.) Over the wax film a thin layer of cotton or a split piece of sheet wadding was placed and a second film of wax was painted, sealing it to the skin at the edges of the cotton dressing. Over this a heavier cotton dressing was applied and then the bandage. We found that if the injured surface was wet or damp the first paraffin film would not adhere.

We began with the various paraffin mixtures enumerated above but we failed to see any differences, except some disagreeable features with the resin mixtures. For example, the undissolved resin sank to the bottom of our warming receptacle and injured the brush with which the wax was applied, making the application to the injured surface painful. We therefore discarded all drugs in our wax and used the commercial "Parowax," applied as above. This was sometimes tinted pink with scarlet red simply for cosmetic reasons.

The question of melting point was at first an important one, because to apply a hot solution to a large area of denuded nerve endings usually brought a prompt and energetic reaction, and to wait until the wax cooled to the extent that a film formed over it meant that it would cool below the liquid state before it could be applied. However, the water bath or household double boiler holds the melting point very well.

A suggestion made to me by Dr. Torald Sollmann has eliminated the importance of melting point temperature entirely, and greatly simplified the dressing as well as adding to the comfort of the patient at the time of the dressing, and in no way changing the results. His suggestion was that the wound be painted with liquid petrolatum, further treatment proceeding as with the wax. In this method a layer of liquid petrolatum and then the cotton or sheet wadding are placed over the injured area before the warm paraffin is painted on the dressing. This method has been followed in all of our recent cases and is greatly appreciated by the patients, who are the court of last appeal. It is essential that the dressing adhere at least to the skin about the edges of the dressing, otherwise the secretions are pouring out over the intact skin and excoriating it, soiling the dressings and making a disagreeable odor.

ADVANTAGES OF THE WAX TREATMENT OF BURNS

1. It is an inexpensive dressing, a pound of wax and a pint of liquid petrolatum, together costing about 65 cents, will dress many burns. It replaces the gauze which at this time is quite expensive.

2. It is a comfortable dressing because it is firm and smooth, and the granulating surface does not grow through it as with the gauze. The paraffin is hard enough to make the dressing somewhat rigid and acts as a splint.

3. It is a cleaner dressing than any I have used because the wound discharge is not permitted to soak through the impermeable wax covering, soiling all the linen that comes in contact with the patient. As the secretions are sealed up, there is no noticeable odor about the patient, which was a disagreeable factor with former methods of treating these injuries.

---

[8] For these experiments "Parowax" could be used. This brand of paraffin, however, melts a little higher than 50 C. It would seem therefore that the more suitable grades of paraffin, such as are described in the recent report of the Association's chemical laboratory, should be employed in the preparation of these mixtures.

4 Superficial burns heal more readily under the wax treatment than with any other method with which I am familiar This is due to but one fact Under former methods of application of solutions and oily substances, no matter what their kind, the granulations penetrated the meshes of the dressing in contact with the wound, and on removal at redressings, these granulations were destroyed, regardless of the care with which the dressing was done or the method employed in the removal of the dressings in contact with the wound The paraffin film method does not adhere to the injured area, and therefore does *not* injure the granulation tissue and the epithelium that is attempting to cover in the denuded area Early in the course of the burn, if it is an extensive one, the entire sealed surface of the dressing will be filled with fluid so that it is merely lifted off Later, as the wound heals, the secretion diminishes, and the granulations begin to grow, the epithelial islands appear as white points at the site of hair follicles, and from these islands the epithelization takes place rapidly because the epithelium is not injured in the dressings and redressings

5 Deep burns do not repair any more rapidly under this method than any other method There is no difference in the scars of burns treated by the wax method and any other method If the true skin is destroyed, the end-result is scar tissue or an ulcer If scar tissue replaces the destroyed tissue, it performs as does scar tissue that develops under any and all forms of treatment, and as scar tissue has performed since the beginning of time We have tried treating two sides of a body burned to about the same degree, with the wax method, the solution method, and various other methods, and have been unable to detect any difference in the end-result, as to scar

6 The wax method is much more comfortable at dressing time than any other method with which I am familiar, for the purely mechanical reason that the granulations do not grow through it, and it is lifted off painlessly To those who have to do with burned men this means a great deal The pain endured by the patient as the dressings were removed under previous methods of treating burns left an unpleasant impression to carry with one on the day's rounds

7 We think there are fewer furuncles on our burned patients since the wax has been used, but nephritis is quite as common

DISADVANTAGES

1 Some patients refused to be treated with the wax when we were applying the warm wax directly to the injured area, because of the pain These complaints are no longer heard since the liquid petrolatum has been used for the first coat

2 Owing to the fact that this method has received so much favorable comment in the lay press, as to negligible scars, perfect comfort on application and other extravagant statements, the man who uses it for the first time will probably be disappointed

3 This method is a time consumer, it requires more care and patience than do the dressings by other methods

---

Winds—Winds are annoying, uncomfortable and objectionable Wind is likely to fill the air with dust It interferes with the satisfactory regulation of the body heat It robs the body of its heat by conduction, if damp, by evaporation if dry A wind also requires on the part of the individual physical resistance which is exhausting to all but the robust —Asst Surg-Gen J W Trask, *Public Health Reports*

XANTHOCHROMIA AND OTHER CHANGES IN THE CEREBROSPINAL FLUID

THEIR FREQUENCY IN CHRONIC SURGICAL SPINAL DISEASES, AND THEIR SIGNIFICANCE *

CHARLES A. ELSBERG, MD
AND
EDWARD L ROCHFORT, MD
NEW YORK

This study is based on an analysis of the cerebrospinal fluids of ninety-two patients with chronic spinal diseases who were operated on by one of us (C A E) at the New York Neurological Institute, at Mount Sinai Hospital, and at other institutions

In all of the patients, the diagnosis, made from the clinical symptoms and signs, was substantiated or corrected by the operative findings and by the examination of material removed at the operation, and in a few cases, at necropsy

Eighteen different conditions are included among the cases, and are arranged in Table 1 in the order of frequency

TABLE 1—CONDITIONS FOUND IN NINETY TWO PATIENTS

Condition	Number of Cases
Extramedullary tumor	20
Multiple sclerosis	15
Intramedullary tumor	12
Pachymeningitis	9
Meningomyelitis	6
Varicose veins of cord	5
Syringomyelia	5
Tumor of conus and cauda equina	4
Neuritis of cauda equina	4
Old fracture of vertebrae	3
Myelitis	2
Transverse myelitis	1
Tuberculoma of cord	1
Aneurysm of spinal vessels	1
Foreign body (knife blade) in cord	1
Hematomyelia	1
Spondylitis	1
Tuberculous spondylitis	1

In all of the cases the spinal fluid was examined for increased protein or globulin and for its reaction to Fehling's solution, and a cell count and Wassermann test were made The color of the fluid and the presence or absence of spontaneous clotting were carefully noted

For the globulin estimation, the butyric acid ammonium sulphate method was used The larger number of the examinations were made in the laboratory of the New York Neurological Institute by Dr D M Kaplan, some were made in the laboratory of Mount Sinai Hospital by Dr D J Kaliski

THE FREQUENCY AND SIGNIFICANCE OF XANTHOCHROMIA

A few months ago, Sprunt and Walker[1] made a report on 100 cases of yellow spinal fluids, reports of which they had collected from the literature, and described five cases which they themselves had observed According to these authors, the yellow spinal fluids may be divided into two main groups

1 Those in which the color is due to dissolved hemoglobin or its derivatives, and which as a rule do not coagulate spontaneously and contain only a small amount of globulin Such fluids usually are associated with brain tumors in contact with the meninges or ventricles

These cases are not considered in this paper

2 The larger and more important group comprises those cases showing the so-called Froin's syndrome, in which the

---

* From the Surgical Department of the New York Neurological Institute and the Surgical Service of Mount Sinai Hospital

[1] Sprunt T P, and Walker J E The Significance of Xanthochromia of the Cerebrospinal Fluid, Bull Johns Hopkins Hosp, 1917, 28, 80

fluid is transparently clear yellow coagulates spontaneously contains large amounts of globulin may or may not show pleocytosis, and gives no positive tests for hemoglobin

As we shall show, the complete Froin syndrome was observed in less than one third of our patients with yellow spinal fluids

Among the cases of chronic disease which form the basis of this paper, there were fourteen with yellow fluid[2] Ten were cases of extramedullary tumor two were gummas one occurred in a patient with varicose veins of the cord, and one in a patient with neuritis of the cauda equina Including with the cases of extramedullary tumor the two syphilitics, twelve, or 85.7 per cent, of the patients with yellow fluid had spinal cord tumors — a proportion that is higher than in previously reported series of cases

The color varied from a light canary yellow to a deep chrome The most deeply colored fluids were observed in the patients with large tumors of the conus and cauda equina, and in a patient with a small growth of the conus and an apparently encapsulated collection of fluid in the lowermost part of the spinal canal

We have never observed any yellowness in the fluid which was withdrawn by aspiration from the spinal cord itself

We are not prepared to say that the yellowness is due alone to compression of the cord and stasis of the spinal fluid If there were no other factors involved yellow fluids should have been frequently observed in other cases of slowly progressive spinal compression, such as old fractures and intramedullary growths

Of twenty-four patients with extramedullary spinal tumors, ten, or about 41 per cent, had yellow fluids It is of interest to note that xanthochromia was not observed in any of the twelve cases of intramedullary growth or in any patient with an extradural neoplasm[3]

As far as we have been able to determine, yellow fluids are not characteristic of any particular kind of intradural new growth, although, as we have already stated, they regularly occur in the so-called giant tumors of the conus and cauda equina

In all but one of the patients with yellow fluid, the disease (tumor, ten cases, gumma, two cases, varicose veins of the cord, one case, neuritis of the caudal nerves, one case) was located in the lower dorsal or lumbar regions In three of the patients the fluid obtained by puncture a few weeks after the removal of the growth was clear and of normal color

In two patients with extramedullary tumors the spinal fluid gave a positive Wassermann reaction, in only one of these was there a definite syphilitic history In these patients intensive specific treatment failed to check the rapid advance of the symptoms At the operation, in each case, there were no evidences of syphilitic involvement of the cord or meninges, but in each a small tumor which proved to be a neurofibroma of the arachnoid was removed

We have had occasion to observe two additional cases with yellow fluid, both of which had positive Wassermann reactions and typical symptoms of cord compression These patients were not operated on, as they improved rapidly under active specific treatment, one of them becoming practically well within six weeks

It is our opinion that in such conditions if extensive specific treatment should fail to give amelioration of the symptoms within a reasonable period, an exploratory laminectomy should be done We consider this advisable not only because of the possibility of the existence of a nonsyphilitic tumor in a syphilitic patient, but also because a gumma which is not rapidly reduced by specific treatment should be removed by surgical means before the spinal cord has been too badly damaged by it

SPONTANEOUS COAGULATION

Although spontaneous clotting of the cerebrospinal fluid is often observed in acute spinal diseases, and after recent trauma of the spine with intradural hemorrhage, it is rare in the slowly progressive spinal diseases which may have to be subjected to operative interference Thus it was observed in only seven of our ninety-two cases, and every one of these patients had an extramedullary new growth It was encountered in seven of our twenty-four cases of extramedullary tumor (29.2 per cent) It occurred in every one of the patients with tumors of the conus and cauda equina (four patients 100 per cent) in whom fluid was obtained by lumbar puncture[4]

We have observed spontaneous clotting only in yellow fluid, but in this connection, it is well to remember that the cases of our series were all examples of slowly progressive disease

INCREASE IN GLOBULIN

The cerebrospinal fluid contained an excess of globulin in fifty-six of the ninety-two patients All but one of the patients with spinal cord tumors had an excess of globulin in their fluid (thirty-six out of thirty-seven, or 99 per cent) This increase was found in every one of the extramedullary growths In fourteen of the twenty-four extramedullary tumors the excess of globulin was well marked, and in three the protein content was so high that spontaneous coagulation occurred

Increase of globulin occurs as well with tumors within the substance of the spinal cord Thus the globulin in the cerebrospinal fluid was increased in twelve of thirteen cases of intramedullary tumors, and in four of these patients there was a marked excess

Excess of globulin is relatively rare in pachymeningitis (33 per cent of our cases) In six cases of meningomyelitis, only three showed an excess of globulin This was most surprising, because one would expect that in chronic inflammatory processes of the meninges, the globulin content of the fluid would be regularly increased

A distinct excess of globulin was observed in three patients with signs of cord compression after an old vertebral fracture, in two patients with swollen cords from toxic myelitis, in cases of transverse myelitis, aneurysm of the posterior spinal vessels, Pott's disease, and in a case of knife blade in the spinal cord

The globulin was not increased in multiple sclerosis (fifteen cases), in neuritis of the cauda equina (four cases), in a case of hematomyelia, in one of spondylitis, etc (Table 2)

These results show that an increase of globulin (Phase 1 of Nonne) is found in many organic diseases of the spinal cord, but that a negative globulin test is not infrequently encountered in organic spinal disease, endogenous level of uric acid excretion was reached, followed by the addition of large quantities of coffee to this diet on each of five consecutive days, and the resumption of the simple purin-free diet until uric acid excretion again reached an endogenous level The results of this experiment are shown in Table 1

---

[2] Two of these patients were not subjected to operation

[3] I Strauss (Proc Am Neur Assn 1912) has however reported a case of spondylitis with bone abscess in which the fluid was light yellow

[4] In many of the large tumors of the conus and cauda which fill up the lower part of the spinal canal no fluid can be obtained by lumbar puncture

TABLE 1—EFFECT OF COFFEE INGESTION ON URIC ACID EXCRETION

Date	Body Weight, Kg	Composition of Urine				Remarks on Diet
		Volume, C c	Total Nitrogen, Gm	Creatinin, Mg	Uric Acid, Mg	
Mar 10	48.3	1,115	6.47	799	272	Purin free
11		1,110	8.28	789	268	Purin free
12	48.5	855	7.45	767	217	Purin free
13	47.9	1,385	9.30	747	251	Purin free
14	47.9	1,205	8.99	763	270	Purin free
15	47.8	2,050	9.45	761	353	Purin free, with daily allowance of coffee containing 1.3 gm caffein
16	47.2	1,105	9.26	792	453	
17	47.6	1,065	8.52	767	469	
18		1,375	9.81	763	537	
19	47.5	1,395	8.78	801	461	
20	47.9	1,180	7.81	803	339	Purin free
21	48.0	1,350	8.17	781	276	Purin free
22	47.9	1,130	9.33	750	269	Purin free

From these results it is evident that the ingestion of large quantities of coffee is followed by a marked increase in the quantity of uric acid excreted

Experiment with Decaffeinated Coffee and Caffein—In order to determine whether or not the increased uric acid excretion observed in the first experiment was due to the caffein ingested, the subject was again placed on a purin-free diet until the excretion of uric acid reached an endogenous level, then for each of eight consecutive days there was added to the diet an infusion of a decaffeinated coffee (Kaffee Hag[19]) prepared in exactly the same way as the coffee of the preceding experiment On the fifth and sixth days of Kaffee Hag ingestion, there was added to the Kaffee Hag 0.47 gm of caffein in the form of caffein citrate, on the seventh and eighth days, 0.94 gm was added in the same way On the next day, purin-free diet was resumed, and continued until uric acid excretion again reached an endogenous level The results of this experiment are shown in Table 2

TABLE 2—THE EFFECT OF KAFFEE HAG AND CAFFEIN INGESTION ON EXCRETION OF URIC ACID

Date	Body Weight, Kg	Composition of Urine				Remarks on Diet
		Volume, C c	Total Nitrogen, Gm	Creatinin, Mg	Uric Acid, Mg	
Mar 29	48.3	1,175	8.77	780	374	Purin free
30	48.3	975	8.48	790	288	Purin free
31	48.4	1 000	8.93	794	285	Purin free
April 1		1 320	9.80	809	290	Purin free, with Kaffee Hag
2	48.3	1,270	8.28	816	241	
3	48.2	1,050	8.74	773	241	
4	47.8	1,350	8.17	804	307	Purin free with Kaffee Hag and 0.47 gm caffein daily
5	48.1	1,300	7.78	752	333	
6	47.5	1 480	8.05	807	366	Purin free, with Kaffee Hag and 0.94 gm caffein daily
7	47.2	1,370	7.78	735	335	
8		675	7.62	750	264	Purin free
9	47.6	825	8.22	743	268	Purin free
10	47.6	1 060	8.43	728	274	Purin free

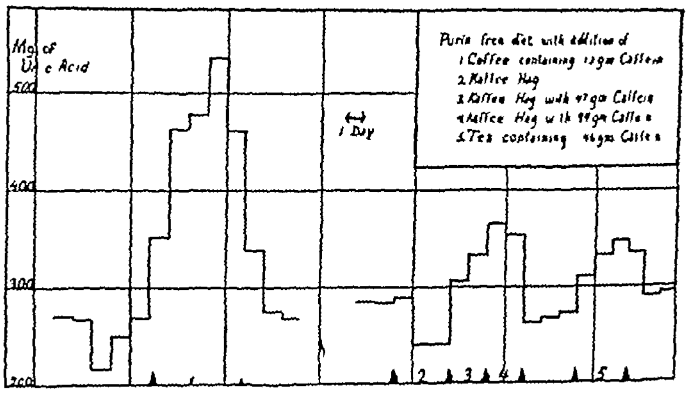
Since the addition of Kaffee Hag to the diet was not followed by any increase in uric acid excretion until caffein was also included in the ration, it seems safe to assume that the increased uric acid excretion of the first experiment was due to the caffein of the ingested coffee

Experiment with Tea—As tea also contains large quantities of caffein, it seemed possible that an experiment on tea ingestion might prove of interest Except that tea was substituted for coffee, the procedure was like that of the first experiment Each day's ration of tea was prepared by pouring 400 c c of boiling water on 28 gm of tea, allowing it to steep for twenty minutes, and decanting Caffein was determined by the same method as in the earlier experiment The results of this experiment are shown in Table 3

TABLE 3—EFFECT OF TEA INGESTION ON THE EXCRETION OF URIC ACID

Date	Body Weight, Kg	Composition of Urine				Remarks on Diet
		Volume, C c	Total Nitrogen, Gm	Creatinin, Mg	Uric Acid, Mg	
April 8		675	7.62	750	264	Purin free
9	47.6	825	8.22	743	268	Purin free
10	47.6	1 060	8.43	728	274	Purin free
11	47.3	1,355	8.12	757	312	Purin free, with tea containing 0.46 gm caffein daily
12	47.3	1,600	7.84	776	333	
13	47.6	1,240	7.62	769	348	
14	47.9	850	8.08	810	336	Purin free
15		1,320	10.03	707	293	Purin free
16	48.3	1 350	9.45	764	295	Purin free

It was found that the ingestion of caffein in tea was immediately followed by increased uric acid excretion



Relation of ingestion of coffee caffein and tea to excretion of uric acid

A comparison of the three tables reveals the fact that the increase in uric acid excretion was proportional to the quantity of caffein ingested, this relation is shown in the graph The increase in the amount of uric acid excreted could be explained as perhaps due to the demethylation and subsequent oxidation of about 13 per cent of the ingested caffein

COMMENT

The results of this series of investigations suggest interesting possibilities for further research Additional experiments should be performed to determine whether or not the increase in uric acid excretion is always directly proportional to the quantity of caffein ingested At the same time the purin base content of the urine should be determined in order to learn whether the increase in uric acid excretion is due directly to the conversion of caffein itself into uric acid or to an indirect stimulation of purin metabolism

The whole question is further complicated by the presence of tannin derivatives in all the beverages under discussion Earlier observations of Levison,[20]

---

[19] For analysis of Kaffee Hag, see Part V of the Report of the Connecticut Agricultural Experiment Station, New Haven, 1915

[20] Levison, C Inaug Diss, Bonn, 1897

Dolff,[21] Bohland,[22] and Sabrazès and Frézal[23] indicate that ingestion of tannic acid and tannin causes a decrease in uric acid excretion, those of Weiss[24] and Ulrici[25] fail to show any such results This phase of the problem could be settled by an experiment similar to the second one of this series, a detannated coffee being used in place of a decaffeinated product

Finally, it would doubtless prove interesting to perform similar series of experiments with dogs and rabbits in order to study the effect of caffein ingestion on the excretion of uric acid and of allantoin in species in which uric acid is not the prominent normal end-product of purin metabolism[26]

SUMMARY

Slight modifications of Benedict s method for determining uric acid make possible more accurate determinations than have hitherto been obtained

The addition of a strong coffee infusion to a purin-free diet causes a marked increase in the excretion of uric acid

The addition of Kaffee Hag—a decaffeinated coffee product—to a purin-free diet does not cause any increase in the excretion of uric acid If, however, caffein is added to the Kaffee Hag, the excretion of uric acid is decidedly increased, as in the case of coffee

The effect of adding tea to a purin-free diet is similar to that obtained by adding coffee to the same diet

The increase in excretion of uric acid after adding coffee, tea or caffein to a purin-free diet seems to be proportional to the quantity of caffein ingested

The increase in the amount of uric acid excreted under these conditions is equal to the quantity of uric acid which would be obtained by the demethylation and subsequent oxidation of from 10 to 15 per cent of the ingested caffein

---

[21] Dolff F Inaug Diss. Bonn 1898

[22] Bohland K. Munchen. med. Wchnschr 1899 **46**, 505

[23] Sabrezas and Frezal Jour de physiol et path gen 1899, **1**, 221

[24] Weiss, J Ztschr f physiol. Chem 1899 **27**, 216

[25] Ulrici T Arch exper f Path. u Pharmakol, 1901 **46**, 321

[26] In addition to the references already given, the following will be found of interest

Brugsch T and Schittenhelm A. Der Nucleinstoffwechsel und Seine Storungen 1910

Jones W Nucleic Acids 1914

Kruger M and Schmidt J Arch f exper Path u Pharmakol 1901 **45**, 259 Ztschr f physiol. Chem 1905 **45**, 1

Levison C Ztschr f klin Med. 1894 **26**, 293

McCrudden F Uric Acid 1905

The Work Treatment.—Those of us who have any imagination cannot fail to realize the difference in atmosphere and *morale* in hospitals where the patients have nothing to do but smoke, play cards, or be entertained, from that found in those where for part of the day they have regular, useful and productive work.—Col. Robert Jones, C.B

AN AUTOMATIC METHOD OF PROLONGED SERIAL BLOOD-PRESSURE REGISTRATION IN MAN*

BERNARD FANTUS, M D
Professor of Pharmacology and Therapeutics University of Illinois, College of Medicine
CHICAGO

Work on this apparatus was commenced in 1909, when the desirability of a method for the continuous observation of human blood pressure was strongly borne in on my mind, as I investigated at the Charité in Berlin in association with Professor R Staehelin the effect of muscle work on human blood pressure by means of the Uskoff sphygmotonometer It became probable that this effect was, in general, a curve with a primary rise above and a secondary fall below the previous level, but we could not prove this for, in spite of taking an observation every five minutes, one could not feel certain that one had caught the maximum and the minimum of the effect

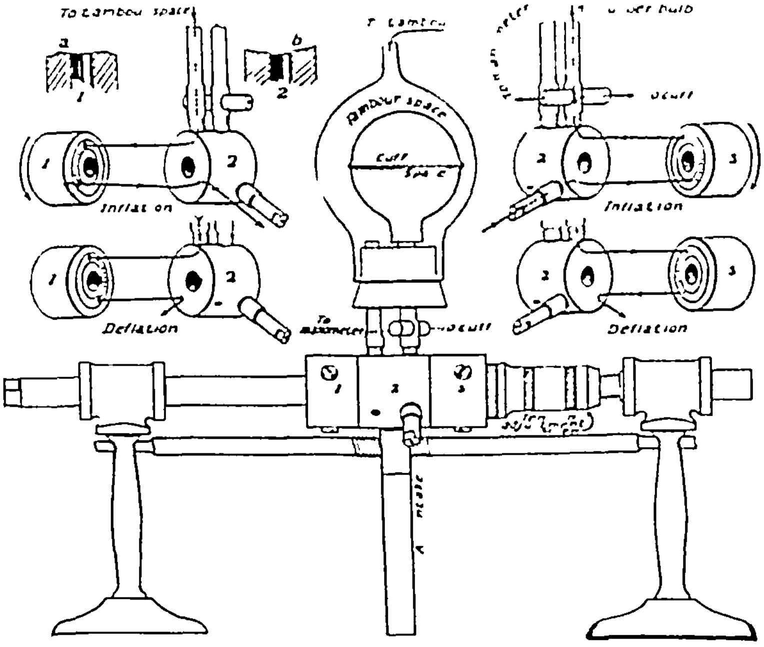


Fig 1—Rotary valve, assembled in center, the working faces of the valve on each side. The numbers 1 2 and 3 have been placed on corresponding parts of the valve in all portions of the illustrations. The longitudinal sections *a* and *b* in the left hand upper corner show the manner in which air tight closure of the valve faces is obtained.

The work of elaborating such an apparatus has since then been continued abortively until, in the summers of 1915 and 1916, Dr Otis M Cope, of the department of physiology of the University of Michigan, joined me in a final effort, which we believe has succeeded The result of this joint work, carried on at the laboratory of physiology of the University of Michigan, was the elaboration of the principles that underlie the construction of an apparatus for the purpose in mind, and the development of a valve, chiefly the design of Dr. Cope, which, however, was not entirely satisfactory Under the impression that a somewhat different method of attack on the problem of construction of the valve might possibly lead to a more satisfactory result, I have continued work on this apparatus at my laboratory with the cooperation of the mechanic, Edward L Feeney, who deserves thanks for patient help and useful suggestions in the elaboration of the rotary valve

THE APPARATUS

The essential portion of the apparatus is a rotary valve, which takes care of the rhythmic inflation and deflation of the sphygmomanometer cuff, while it simultaneously opens the tambour space of an Erlanger arrangement during the inflation and deflation, and closes it during the time of recording

---

* Presented before the Chicago Society of Internal Medicine March 26 1917

* From the Pharmacologic Laboratory of the University of Illinois, College of Medicine.

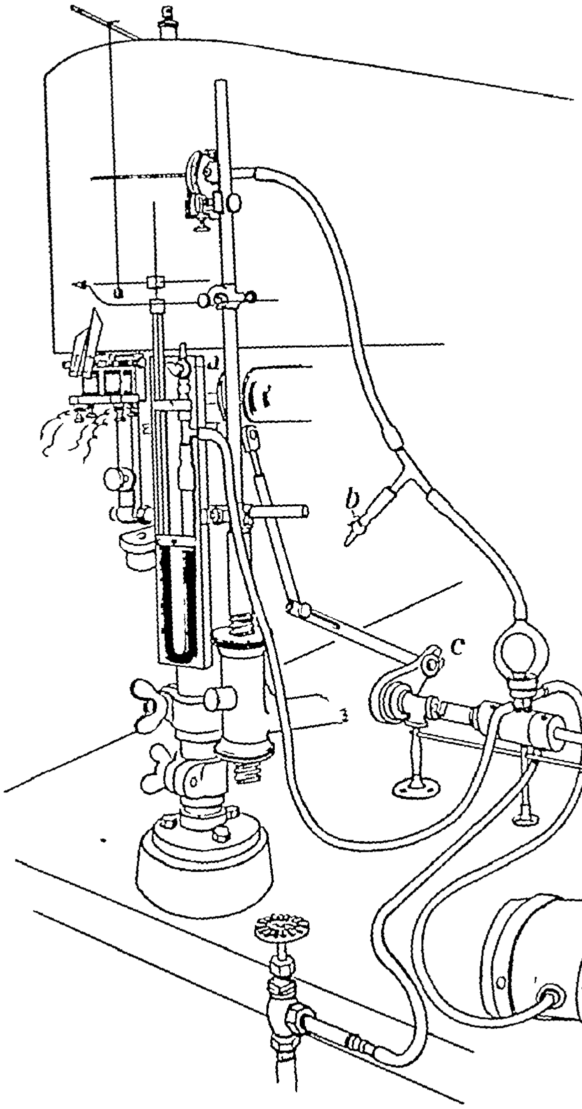


Fig 2 —Rotary valve connected with the recording apparatus The valves *a* and *b* introduce a regulable fine leak in the tambour space and cuff space, respectively The cam *c* operates the starting and stopping mechanism of the kymograph

There are, then, in the apparatus, two air spaces that do not open into each other I shall call them “cuft space” and “tambour space,” respectively (Fig 1) The cuff space communicates freely with a mercury manometer and an elastic rubber bulb The manometer records, on smoked paper, the height of the pressure existing in the cuff space at a given moment The rubber bulb transmits to the tambour space the pulse oscillations occurring during the gradual deflation of the cuff To inflate the cuff, a constant source of compressed air at a pressure of over 300 mm of mercury is required In the air intake pipe, there should be provided a valve that readily permits slight changes to be made in the air admitted to the cuff space This valve, once turned on to the proper degree, remains open throughout the period of use of the apparatus By means of the rotary valve, which revolves at the rate of about once a minute, a momentary connection is made between the tube carrying the compressed air and the cuff space Thus inflation is accomplished Then, for two thirds of the circumference of the valve, the cuff space is closed, excepting for a small regulable leak (Fig 2 *a*), which permits gradual deflation to take place Since, during the period of gradual deflation, the tambour (to be presently described) records the tracing to be interpreted, I shall speak of this as the “recording time” As soon as the recording has been accomplished, it is desirable to have the air escape rapidly from the cuff space, so as to permit a period of rest for unimpeded return circulation in the arm of the person under examination We have found that one third of a minute is sufficient for this purpose Hence, after the rotary valve has traveled for two thirds of its circumference, an opening is encountered by means of which the cuff space communicates with the surrounding air, permitting the pressure to fall instantly

The cuft space is in relation with the tambour space by means of a glass bulb into which the rubber bulb of the cuff space projects, all the connections being air-tight Thus the oscillations of the rubber bulb, imparted to it by the pulse, are magnified and recorded by means of the tambour To eliminate, as much as possible, the recording of the large pressure oscillations that occur during inflation and rapid deflation of the cuff space and might damage the tambour, it is necessary, as has been shown by Erlanger, that the tambour space be freely open during these stages This is accomplished by holes placed in that side of the rotary valve which controls the tambour space These holes are spaced in such a manner as to act synchronously with those controlling the cuff space The holes, in relation with the tambour space, must

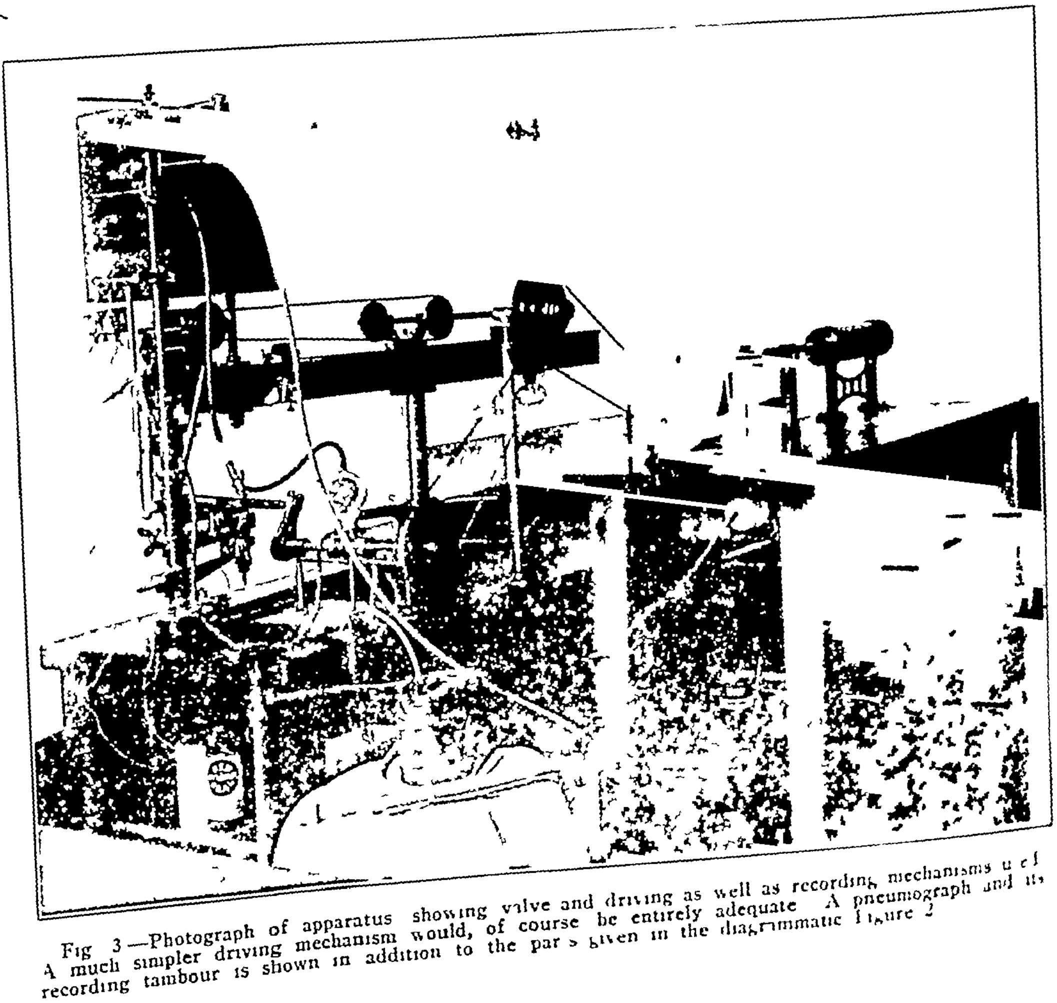


Fig 3 —Photograph of apparatus showing valve and driving as well as recording mechanisms used A much simpler driving mechanism would, of course be entirely adequate A pneumograph and its recording tambour is shown in addition to the parts given in the diagrammatic Figure 2

be a little larger than those in relation with the cuff space, whereby the large and undesirable oscillations can be more effectually eliminated, than if they are of

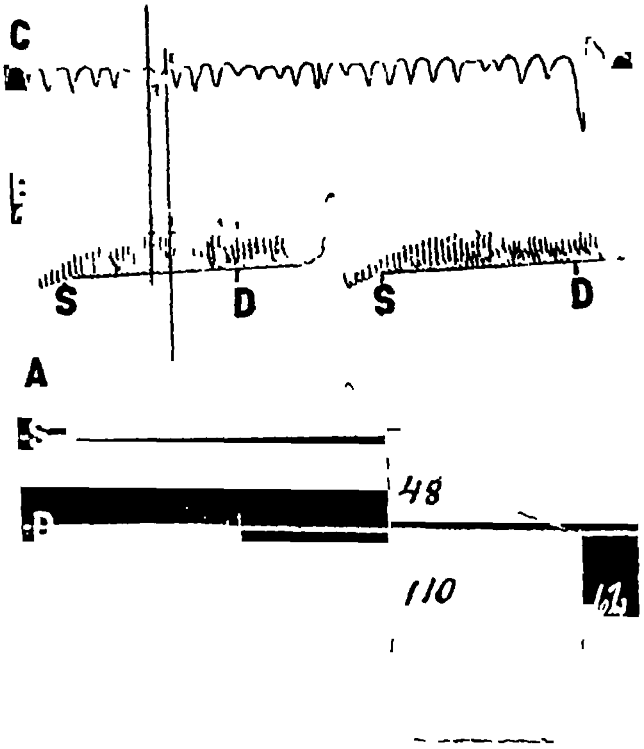


Fig 4—Determination of systolic and of diastolic pressure The Erlanger criterion for systolic pressure namely the first divergence of the two limbs of the tambour record (*S* in Curve B) is well shown The diastolic criterion chosen is the last large oscillation of the tambour lever (*D* in Curve B) This is more difficult to decide on, owing to the disturbing influence of respiration, as is well shown in this tracing by the unusually deep inspiration at the end of the tracing which obviously produced the increase in the size of the tambour oscillation following it and which would have given rise to difficulty of interpretation of the record, had the respiration record not been taken simultaneously In the tracings *A* is the manometer curve, *B* the tambour record and *C* the respiration record *S* indicates the level of systolic pressure and *D* the level of diastolic pressure.

exactly the same size As Erlanger has shown, it is also essential that a fine leak exist in the tambour space Cope has found that, by using an adjustable leak (Fig 2 *b*), one may obtain an optimum record of the oscillations of the bulb

In order to economize drum space, it is desirable to have a mechanism that automatically starts and stops the drum This may be done by means of a cam (Fig 2 *c*), attached to the shaft of the rotary valve, which operates the starting mechanism of the drum

A long paper kymograph is required, as well as signal magnets for the time and other recording A second tambour for a pneumograph tracing (*C* in Figs 4 and 5) is also desirable, as respiration affects the character of the pulse oscillations, as is shown by Figure 4

We have commenced work on the problem of an apparatus that will furnish its own compressed air, as well as, if possible, do away with the necessity of applying fresh loops of paper, when one takes a very prolonged record

INTERPRETATION OF THE RECORD

The records (Figs 4 and 5) furnished by this apparatus consist of a succession of so-called "continuous" Erlanger[1] tracings (*B*), placed above a manometer curve (*A*) that was obtained synchronously with the pulse tracing The latter is used to determine the points of systolic and of diastolic pressure (Fig 4) For determining systolic pressure, we have found the Erlanger[2] criterion, namely, the separation of the lower end of the limbs of the tambour record much more useful than the von Recklinghausen[3] criterion—that is, the sudden increase in size of the oscillations—for, at times, the increase in size is not at all sudden, but quite gradual

The decision regarding the point at which the diastolic pressure is to be placed seems somewhat more difficult Erlanger's[1] criterion for diastolic pressure—the maximum amplitude of tambour oscillations—has been shown by MacWilliam and Melvin[4] not to be correct They suggest using the last of the large oscillations for this purpose Cope and I have found that the MacWilliam and Melvin criterion coincides quite well with the fourth auscultatory phase obtained by means of the Korotkoff method, as shown by records obtained with our apparatus, when a signal magnet (whose tracing is placed in the accompanying figures above the time record) is used to record the Korotkoff sounds, as has been done in some of the curves shown Unfortunately, at times, the oscillations decrease gradually rather than abruptly, so as to leave one in doubt as to just where one should decide the change has taken place This difficulty can be overcome, to a certain extent, by permitting the escape of air during the recording period to be sufficiently rapid for good definition of differences Nevertheless, the influence of the respiratory pressure changes occasionally also adds to the difficulty of arriving at a judgment regarding the point to be chosen

Making a simultaneous record of the Korotkoff sounds by means of the signal magnet is quite helpful

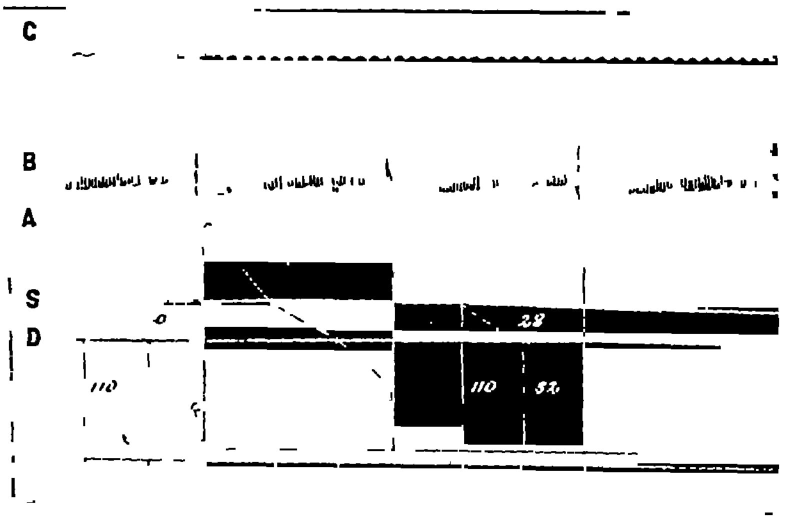


Fig 5—Portions of a record from a normal person showing the practically uniform maintenance of pulse pressure that seems characteristic of normal tracings

in the interpretation of the record Nevertheless, I have found that frequently, when doubt exists as to where one should place the diastolic pressure, because of interference of the respiratory oscillations, the same doubt existed in deciding on the end of the fourth phase of Korotkoff For, at times, one or two of the muffled sounds of the fourth phase are followed by one or two sounds that are again quite loud The tracing records this faithfully

---

[1] Erlanger Joseph Johns Hopkins Hosp Rep 1904, **12**, 53
[2] Erlanger Joseph Am Jour Physiol, 1908 **21**, 24
[3] Von Recklinghausen Arch f exper Path, 1906, **55**, 375
[4] MacWilliam and Melvin Heart 1914 **5**, 153

By projecting the point of systolic and of diastolic change in the pulse tracing (*B*) down on the manometer curve (*A*), and by connecting the corresponding points on succeeding manometer curves, a good picture of the blood-pressure changes from minute to minute can be obtained These changes are comparatively slight under normal conditions, though waves, probably corresponding to the Traube-Herring waves, are easily discernible By means of this apparatus, I have obtained satisfactory records of the influence on blood pressure of emotion, of attention as well as of muscular movement, and of the effects of a general electric light bath, of amyl nitrite inhalation, and of nitroglycerin administration

CONCLUSION

An apparatus having been devised whereby it is possible to obtain graphic records of human blood pressure for considerable periods of time, it will probably be found useful not only in psychologic, physiologic and pharmacologic research, but also in clinical medicine, in diagnosis as well as in treatment For instance, it might be of diagnostic as well as of therapeutic importance to differentiate between those cases of high blood pressure that respond, in a typical manner, to nitrite and those that do not In critical operative cases, the continuous recording of blood pressure during the anesthesia might be of help to the surgeon

---

Blood Changes in Trinitrotoluene Poisoning—Capt Matthew J Stewart of the Royal Army Medical Corps has recently summed up his observations in fourteen clinical cases of trinitrotoluene poisoning with reference to the blood as follows In the early stages blood changes are extremely slight, but pronounced deviations occur later A polymorphonuclear leukopenia, often of extreme degree, with no corresponding failure of the lymphatic function, was observed in nine out of the fourteen cases An anemia of "pernicious" type, but lacking certain notable characteristics of idiopathic anemia, especially poikolocytosis and punctate basophilia, occurred in three cases The tentative conclusion arrived at is that the occurrence of either of these changes in any marked degree in a case of trinitrotoluene poisoning is to be regarded as a serious prognostic indication, but this is a point on which further observation should throw much light An absolute but variable lymphocytosis was found in nine cases It did not appear to bear any relationship to either of the foregoing conditions A pronounced and progressive neutrophil leukocytosis occurred in one case which ended fatally Qualitative changes in the red cells were present in a marked degree in one case only, and punctate basophilia was never observed —*Proceedings of the Royal Society of Medicine,* March, 1917

A NEW MASTIC TEST FOR THE SPINAL FLUID *

JAMES A CUTTING, A B, M D
Assistant Physician, Agnews State Hospital
AGNEW, CALIF

Recently much work has been done in order to find a serologic test which will be positive in all cases of syphilis of the nervous system Collins[1] estimates that 15 per cent of paretics and 70 per cent of cerebrospinal syphilitics fail to give a positive Wassermann reaction in the spinal fluid While these figures are perhaps higher than the average, the fact still remains that a definite percentage do fail to give a positive Wassermann Collins[1] also estimates that 97 per cent of these cases give a positive colloidal gold reaction Any one, however, who has prepared the gold solution and has carried out the test cannot but be impressed with the many difficulties it entails

While working with the colloidal gold solution, Emanuel[2] endeavored to find a substitute which could be more easily prepared and in which the reaction could be carried out with less possibility of error For this purpose it seemed that an emulsion of mastic was best adapted Neisser and Friedman, among others, had already demonstrated the similarity in action on albumin of this substance and colloidal gold

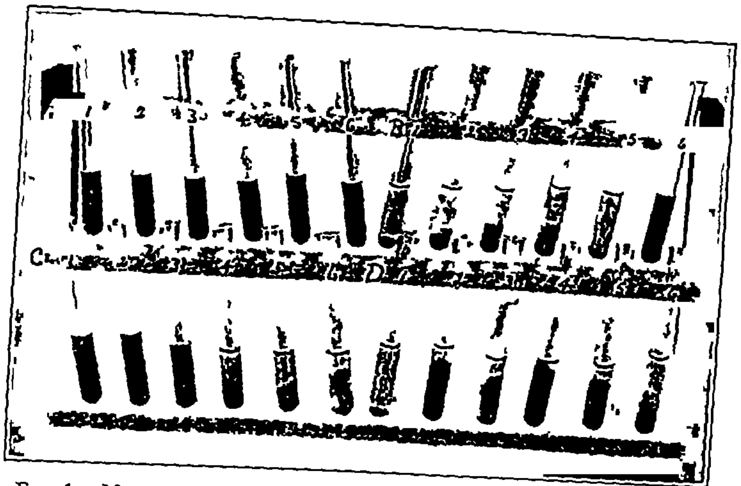


Fig 1—Mastic reactions *A*, negative, *B*, positive, in both *A* and *B*, potassium carbonate has been used in making up the salt solution, *C* and *D*, the same cases in the absence of the potassium carbonate. (Note the confusion in *C*, in which Tubes 4 and 5 show a precipitate)

In brief, Emanuel's procedure was as follows Five test tubes were used containing, respectively, 0 25, 0 125, 0 062 and 0 031 c c of spinal fluid mixed with 1 c c of a 1 25 per cent salt solution The fifth tube contained no spinal fluid, and was used as a control Lastly, 1 c c of an emulsion of mastic was added to each tube In this manner he tested out the spinal fluids of thirty psychiatric patients In paresis, tabes and cerebrospinal syphilis there occurred a precipitation of the mastic in all the tubes, whereas in the normal fluid no flaking occurred except in the control The mastic solution had to be made up fresh each time and quickly used

In order to try out the reaction, in the last nine months I have made mastic tests on the spinal fluids of 200 different patients at the Agnews State Hospital In each case I have made a cell count, in 100 cases the butyric acid test, and in thirty cases the colloidal gold reaction In every case a Wassermann examination has been made

The mastic reaction I found to be a very delicate one If the salt solution and the emulsion of mastic were made with distilled water and promptly used, a rapid precipitation of the mastic occurred in the control tube which contained no spinal fluid If, however, tap water was employed, no precipitate appeared Even washing the test tubes with tap water prevented the reaction The older the mastic emulsion the stronger was it necessary for the solution of sodium chlorid to be in order to cause a precipitate

---

* Read before the Agnews Psychiatric Society, Feb 9 1917

[1] Collins, Joseph Pathognomonic Alterations of the Cerebrospinal Fluid in Syphilis of the Nervous System, Am Jour Med. Sc, 1916, **151**, 222

[2] Emanuel, G Eine neue Reaktion zur Untersuchung des Liquor cerebrospinalis, Berl klin Wchnschr, 1915, **52**, 781 804, abstr, The Journal A M A, Sept 4, 1915, p 908

Also, I found that when newly prepared solutions were made with freshly distilled water there was a tendency for the precipitations to occur, not only in the fifth tube but also in the fourth, even in negative cases This led to some confusion in interpreting the results It was useless to employ more than four tubes, as further dilution left so little spinal fluid in the mixture that the salt automatically caused a precipitation of the mastic, whether the case was a positive or a negative one

I found, however, that when the control showed no precipitation, as when the solutions were made with tap water, pathologic spinal fluid still caused the mastic to come down I then endeavored to find a reagent which could be used with distilled water to hold the salt and mastic in solution and which would be of universal adaptability, since tap water varies so greatly in different localities After trying many substances, such as potassium hydroxid and lime water, I at length found that a very dilute solution of potassium carbonate answered this purpose perfectly When 1 c c of a 0 5 per cent. solution of the potassium carbonate was put in each 99 c c of the 1 25 per cent salt solution, the mastic was held in suspension and was precipitated only when the pathologic fluid was added This allowed me to run the dilution out as far as I liked, and the control tube, instead of showing a precipitation, showed none

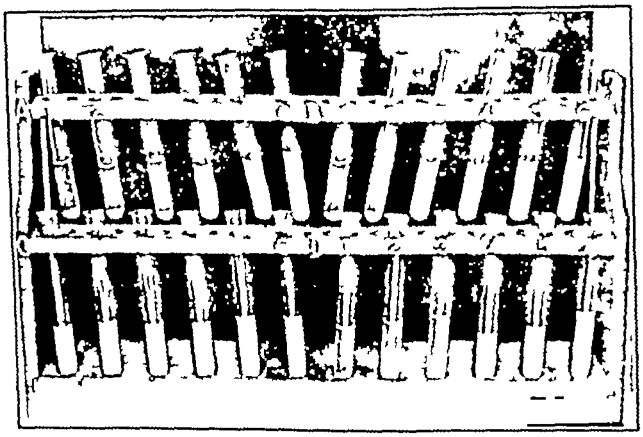


Fig 2.—Mastic reactions *A* in an old paretic *B* in an early case of paresis, *C*, negative reaction in a case of dementia praecox, *D*, reaction in a case of paresis under salvarsanized serum treatment (Before treatment, Tubes 1 2 3 4 and 5 showed a precipitation)

The advantage of this is readily seen in the following experiment After mixing 1 drop of a paretic's spinal fluid with 7 drops of normal fluid I was able to get a mixture with a low syphilitic content By using these proportions I ran a mixture through two series of five tubes each (*a*) in which no potassium carbonate was used and (*b*) in which the carbonate was employed In *a* the result was a precipitation of the mastic in the first two and the last tubes In *b* a precipitation showed only in the first two tubes When 2 drops of syphilitic fluid were used in the mixture, the first four tubes in *a* came down together with the control In *b* only the first four tubes were precipitated This ended the experiment in the group containing no potassium carbonate, as all the tubes were now precipitated In the series, however, containing the potassium carbonate, in which it was possible to increase the number of tubes in the group without automatically causing a precipitation of the mastic, the undiluted syphilitic fluid caused six tubes to come down In other words, the greater the percentage of pathologic fluid present, the greater the number of tubes precipitated in the series This clearly demonstrates, it seems to me, that the degree of positiveness in a given case can be more accurately measured when the potassium carbonate is employed to hold the mastic in suspension

The following I have found best adapted as a routine for doing the test

A stock mastic solution is made by dissolving 10 gm of gum mastic in 100 c c of absolute alcohol, and then filtering This stock solution keeps indefinitely if well corked To 2 c c of this solution 18 c c of absolute alcohol are added, and insufflated rapidly into 80 c c of distilled water This makes an emulsion of mastic which is opalescent when held to the light This solution can be used immediately or after several days, indeed the reactions seem to be more easily read when a solution is employed which has stood for at least a few hours

Next, a 1.25 per cent sodium chlorid solution is made with distilled water and to each 99 c c of this salt solution is added 1 c c of a 0 5 per cent solution of potassium carbonate made up with distilled water

Then six small test tubes, such as are regularly used in the Wassermann tests, or more if desired, are placed in a rack. These tubes should have been washed thoroughly in tap water, then in denatured alcohol, to remove any old mastic adhering to the sides of the tubes, rinsed in distilled water and dried—conveniently in a hot air oven To the first tube 1.5 c.c. of the combined salt and potassium carbonate solutions are added and to the other 1 c c. each Then 0 5 c c of spinal fluid is added to the first, and after thorough mixing 1 c c is transferred from the first to the second, 1 c.c from the second to the third, and so on, the last cubic centimeter that remains over from the next to the last tube being thrown out, and no spinal fluid being put in the control Now to each tube 1 c.c of the mastic solution is added and stirred thoroughly with a glass rod, care being taken to wash the rod with distilled water before going to the next series It is best to finish each group before beginning another

The racks are set away, and in from twelve to twenty-four hours the end-results can be read If the racks are placed in an incubator at 37 5 C., the precipitation is complete in from six to twelve hours A yet more rapid method, I find, is to incubate for two hours and then centrifugalize, in which event the mastic will be precipitated in the positive tubes

In positive cases the mastic will be precipitated in the first one, two, three or four tubes, and up even as high as the eighth in some The reaction is simple to read and very convincing The solutions are easily made, they are extremely inexpensive, and the end-results are much more easily read than in the colloidal gold tests Indeed, were one to compare the colloidal gold and mastic tests side by side, the mastic is found to be the more convincing In the fluid of one paretic with 133 cells per cubic millimeter, the colloidal gold showed after twenty-four hours only a 3332100000, whereas the mastic came down in eight of the ten tubes used It was only after allowing the gold solution to stand for three days that a more complete curve resulted Three paretic fluids showed irregularities with the gold test, which if taken alone would have been hard to interpret, whereas in all three the mastic showed a typical reaction The accompanying table shows the classification, the number, and the results obtained by the mastic and Wassermann reactions on the 200 cases

In fourteen cases there was a positive mastic and a negative Wassermann reaction Eleven of these had increased cell counts together with all the clinical signs of paresis and were so diagnosed Two were diagnosed as cerebrospinal syphilis The other case giving a positive mastic and a negative Wassermann reaction was that of a man of 50, who two and a half years before entering the hospital had had a "stroke," leaving him with a right-sided paralysis On entering the hospital he had a mitral insufficiency with casts and albumin in the urine, and died one month later as a result of the heart and kidney complication He gave a definite history of alcohol with an indefinite history of syphilis The spinal fluid examination showed a cell count of 10 with an increase of globulin In no case was there a positive Wassermann and a negative mastic reaction In two cases in which the mastic test was always positive, the Wassermann test was at first negative, but later became positive

Of the seven cases of epilepsy, two showed a very slight precipitation in the first tube Two of the fifty cases of dementia praecox showed the same reaction, but these were not to be compared with the precipitation in a positive case In one patient diagnosed as having cerebral hemorrhage, there was a ± in the first two tubes

TABULATION OF TWO HUNDRED MASTIC EXAMINATIONS

Classification	Number of Cases	Mastic	Wassermann
Paresis	68	+	+
Paresis	11	+	—
Cerebrospinal syphilis	2	+	+
Cerebrospinal syphilis	2	+	—
Tabes	1	+	—
Dementia praecox	50	—	—
Manic-depressive psychosis	31	—	—
Arteriosclerotic brain disease	6	—	—
Alcoholic psychosis	6	—	—
Senile psychosis	5	—	—
Involution melancholia	2	—	—
Paranoia	3	—	—
Mental defective	2	—	—
Autointoxication	1	—	—
Epilepsy	7	—	—
Traumatic psychosis	1	—	—
Alcoholism	1	—	—
Cerebral hemorrhage	1	±	—

Thus far my work has been confined to psychiatric patients What the action will be in such diseases as poliomyelitis and tuberculous meningitis must be further investigated

SUMMARY

The mastic test, when taken together with the history and with the cell count, is of undoubted aid in the diagnosis of syphilis of the nervous system

By the addition of potassium carbonate, the degree of positiveness can be graded very accurately

By first incubating and then centrifugalizing, the test can be completed in two hours

It parallels quite closely the colloidal gold reaction, and is more easily interpreted and much more easily and quickly performed

In eighty-four cases of syphilis of the nervous system, the mastic test was uniformly positive

---

Workmen's Compensation—Thirty-seven states, the territories of Alaska, Hawaii, and Porto Rico have enacted compensation laws, the United States adopting a like principle for the relief of its civilian employees under date of Sept 7, 1916—National Industrial Conference Board

---

Clinical Notes, Suggestions, and New Instruments

METHODS FOR THE COLLECTION AND TRANSPORT OF BODY FLUIDS FOR BACTERIOLOGIC INVESTIGATION

Alfred H Caulfeild, M B,* Toronto, Ont
Captain, Canadian Army Medical Corps

The exigencies of war have made the bacteriologic investigation of the body fluids even more imperative than during times of peace, while at the same time the accommodations surrounding the soldier-patient are frequently less adaptable to bacteriologic technic than they are in civilian practice. Consequently it seems desirable at the present time to record any advantageous modifications in the instruments and apparatus used for the collection and transport of such fluids

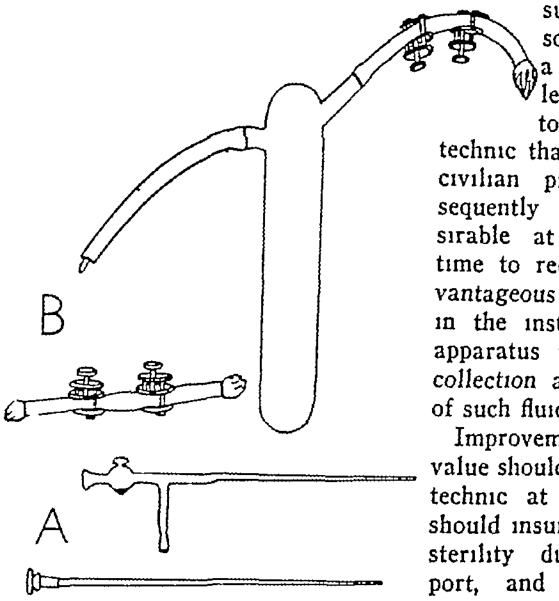


Fig 1—*A* trocar and cannula *B*, collection tube or flask of quartz glass

Improvements to be of value should simplify the technic at the bedside, should insure safety and sterility during transport, and should not necessitate elaborate methods of preparation Indeed, it is most desirable that the value and the result of the final investigation should not be dependent on any special care or expertness on the part of the nurse or lay attendant responsible for the original sterilization or for the transport of the material In this connection it may be stated that devices by which sterilization may be carried out in the dry oven or autoclave, and which will leave without further manipulation the apparatus or instrument ready for transport, and convenient for use at the bedside, are the most satisfactory and trustworthy Particularly is this true for those enjoying the facilities of organized hospitals and institutes, as it relieves them of all irksome detail or improvisation. For such metal articles as needles, trocar-cannulas, etc, dry sterilization is preferable, in that any possibility of rusting and blocking of the bore is avoided It is along these lines and with these points in view that I have attempted to develop the technic

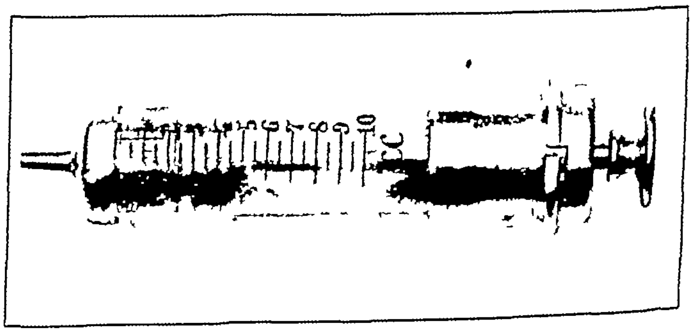


Fig 2—Syringe

The general satisfaction I have experienced with the method herein described (which is an amplification of those previously used by me) is to a great extent due to the use of quartz glass for certain parts of the apparatus, and as the use of this material, so far as my knowledge or information goes, is not at all general with the profession, I venture to present these methods in full, rather than serve them piecemeal in possible future publications The particular advantage of quartz glass or silica lies in the fact that it has no coefficient of expansion, and consequently will not break or crack in extremes of heat and cold

---

* Detailed for special investigation from No 4 Canadian General Hospital (University of Toronto)

COLLECTION OF MATERIAL (SUCH AS CEREBROSPINAL FLUID) BY MEANS OF TROCAR AND CANNULA

The danger of contamination in catching fluid, as it flows from the open end of a straight needle or cannula, as well as the difficulty of avoiding hand contamination incident to the puncture operation led me to adopt the form of trocar and cannula shown in Figure 1 A The proximal opening of this instrument is ground to fit the nozzle of a syringe, in case the amount of fluid to be drawn is small and not under pressure

The collection tube or flask of quartz glass is shown in Figure 1 B In my experience tubes of this nature, made of ordinary glass, fail to give satisfaction, and sooner or later break during sterilization Preparation for sterilization consists in fitting and wiring to the upper arm a short piece of pressure rubber tubing the open end of which is lightly packed with cotton, and in attaching to the lower arm a short piece of ordinary rubber tubing, the open end of which is plugged with a glass rod This will later facilitate handling at the bedside At the same time an extra piece of pressure tubing should be similarly packed at the ends with cotton The collection flask thus assembled and the separate piece of pressure tubing should be properly wrapped and sterilized in the autoclave As four pressure tubing clamps will be required after the tube is filled at the bedside, it is advantageous to tie these to one of the sterilized articles

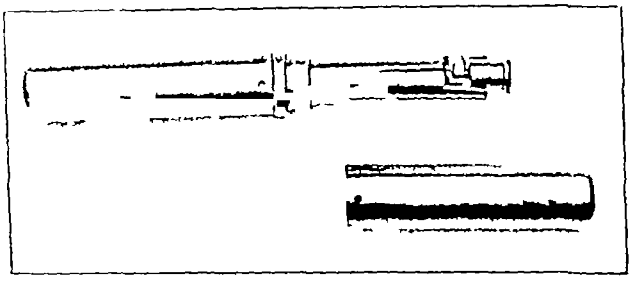


Fig 3 —Needle holders.

Technic at the Bedside—The cannula and flask are carefully unwrapped, and the soft rubber tubing slipped on the side arm of the former Any possibility of contamination can be avoided by the use of an alcohol flame. Puncture is made with the collecting tube connected in this fashion to the cannula, then the trocar is withdrawn and the tap turned off If fluid has appeared at the tap arm opening, it will readily run through the closed passageway into the tube In case the amount of fluid is so small that it does not flow, a sample may be obtained by fitting a syringe into the cannula.

When the puncture is made, the collecting tube, so to speak, takes care of itself, afterward it should be held upright When the cannula is withdrawn, the tubing is pinched with the fingers and afterward separated from the arm of the tube The opening of the arm with any content of fluid thus exposed should be thoroughly flamed, and while hot slipped into the spare piece of pressure tubing, which can be additionally secured by copper wiring, if this is thought necessary Finally, by tightly screwing down two clamps on each piece of tubing, these passageways are effectively blocked The tube is now packed or carried in any position and is proof against contamination taking place during transport[1]

COLLECTION OF MATERIAL (SUCH AS BLOOD) BY HYPODERMIC SYRINGE AND NEEDLE

The general satisfaction and convenience that would be afforded, were it possible to sterilize in the dry oven syringe and needles already packed in their cases, led me to devise the syringe needle holder and case illustrated

That the parts of the syringe (Fig 2) need not be separated during sterilization, the proximal end of the graduated quartz glass barrel is cemented to a metal collar corresponding in length to the plunger, and of slightly larger diameter than the plunger to allow for expansion The collar thus provides, so to speak a safety expansion chamber for the plunger, which is withdrawn into the chamber during the process of sterilization

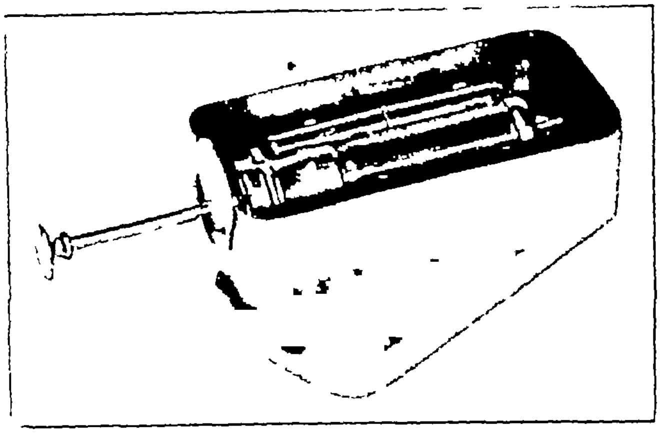


Fig 4 - Case and adjustment for sterilization

As shown in the illustration of the needle holder (Fig 3), the removal of either protection cap exposes the head of one of two needles By this means adjustment of the needle of the nozzle of the syringe can safely be made at the bedside. The remaining cap allows one to handle the needle holder with ease and without risk of contaminating the remaining needle or the needle adjusted In one of the caps there is a small aperture which before sterilization should be adjusted to a similar opening in the inner sheath of the holder to prevent the cap being forced off

The illustration of the case, and adjustment for sterilization (Fig 4) shows the syringe with piston extended through an opening in the end of the case, so that the plunger rests in the safety chamber It is advisable to pack cotton around the needle holder and syringe before replacing the top and sterilizing As soon as cooling has taken place after dry sterilization the piston is shoved home into the barrel with sterile forceps, sterile cotton inserted or not as desired, and the opening closed by the shutter This shutter is so constructed that it is with difficulty opened while the lid is on the case Sterilization in the manner described insures that everything within the case is sterile, and moreover the syringe and needles will later be found convenient for use at the bedside

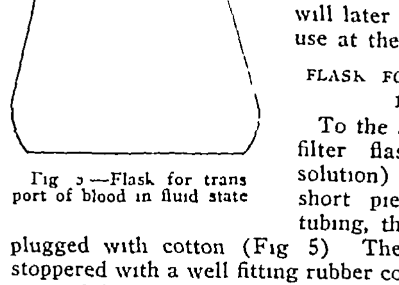


Fig 5 —Flask for transport of blood in fluid state

FLASK FOR TRANSPORT OF BLOOD IN FLUID STATE

To the side arm of an ordinary filter flask (containing citrate solution) is attached and wired a short piece of pressure rubber tubing, the open end of which is plugged with cotton (Fig 5) The mouth of the flask is stoppered with a well fitting rubber cork, which is additionally secured by crossed copper wire After sterilization in the autoclave, the tubing is blocked by two pressure tubing clamps and the cork paraffined.

Technic at the Bedside—As everything within the syringe case is sterile, the syringe intact and ready for use, and as the head of the needle can be exposed with safety and ease, the adjustment and use of the syringe and needle are very simple Any possibility of contamination is fully excluded by the use of an alcohol flame To discharge the blood from the syringe, the needle, on withdrawal from the vein and while still attached to the syringe, is heated and pressed through the cork of the flask Both clamps on the rubber tubing should be released before depositing the blood, and afterward retightened The flask may now be packed for transport[2]

---

[1] Cleaning of these tubes is easily accomplished as any particles or clots not easily washed out can be completely carbonized over a Bunsen or blast flame

FLASK FOR DISTRIBUTION OF STERILE ENRICHMENT FLUIDS IN QUANTITATIVE AMOUNTS TO CULTURE TUBES

The subsequent bacteriologic investigation of the body fluids is so closely connected with their collection and transport that a brief reference to a device dealing with this aspect may be regarded as within the scope and intention of this paper

The purpose of the flask is to provide a sterile receptacle so that enriching fluids can easily and without risk of contamination be distributed quantitatively to tubes of the ordinary laboratory mediums Some such method is almost a necessity if the work is not routine in character In this part of the work, as well as in the collection of body fluids, simplification in the technical detail is the surest method of incorporating bacteriologic examinations with the practice of medicine.

The arrangement of the apparatus consists in attaching to a large filter flask a graduated tube by means of pressure rubber tubing as shown in Figure 6 The tightly fitting rubber cork of the flask is pierced by a cotton-plugged air vent, and the glass tubing (for siphonage) which is connected to the graduated cylinder This cylinder plugged with cotton at the top leads by means of pressure tubing to a hooded pipet, which is protected by a test tube held in place by a cork in the manner shown by the illustration It is safer if all rubber tubing connections and the cork are wired and after sterilization paraffined As the different fluids must be obtained sterile or rendered so by filtration or other means, the flask thus fully assembled is sterilized before being filled through the side arm, after which this side passageway is properly blocked by a heated rod or tube and clamped Once the flask is filled, siphonage is obtained by forcing air through the air vent and releasing the clamp to the graduated chamber As the hooded pipet is made of quartz glass, there is no danger of cracking during the necessary use of the Bunsen flame before and after the withdrawal of the fluid[3]

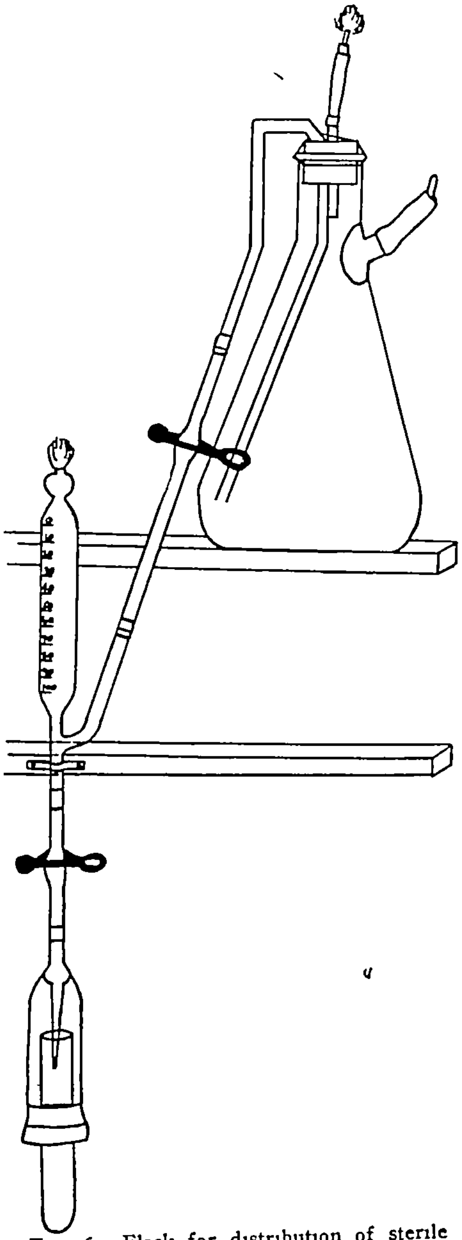


Fig 6 —Flask for distribution of sterile enrichment fluids in quantitative amounts to culture tubes

THE RATIONAL AND COMFORTABLE TREATMENT OF FRACTURE OF THE CLAVICLE BY MEANS OF A CRUTCH SPLINT

Walter Kelton, M D , Seattle

Not long ago there came under my observation a case of fracture of the clavicle wherein the Sayre dressing, or Velpau could not be utilized The patient, in addition to sustaining a fracture of the clavicle, had also received a severe trauma of the upper arm and forearm of the same side, causing great swelling at the elbow The arm was fleshy, and this, together with the swelling, made it impossible to use any of the conventional dressings, as in order to do so it would have been necessary to keep the patient continually narcotized and to take chances of interference with the circulation

A diligent search of the literature for some kind of apparatus or dressing which would take care of the case in hand revealed the Velpau, Sayre and Dessault dressings, and a few modifications of these, as the only hope which could be offered the patient for the correction of his injury

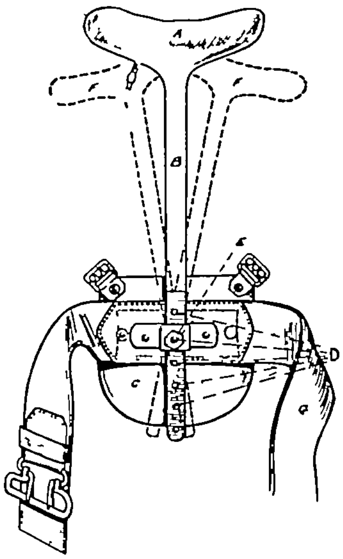


Fig 1 —Side view of fracture crutch

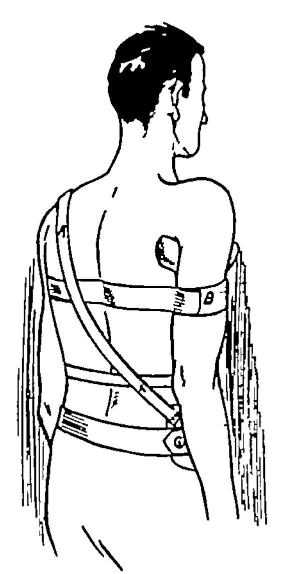


Fig 2 —Rear view of patient with straps adjusted

I constructed an apparatus which would perform the dual service of correcting the injury and alleviating the suffering

The apparatus consists of a T shaped steel bar, on the horizontal or upper part of which rests a pneumatic tube covered over with chamois skin and which fits into the axilla (Fig 1 *A*) The upright steel bar fits the side of the chest and extends downward to the hip (Fig 1 *B*), where it is attached to an aluminum plate covered also with chamois skin and shaped to fit snugly over and rest on the hip (Fig 1 *C*) Holes placed equidistant in the upright bar (Fig 1 *D*) render the apparatus adjustable to any adult. The bolt (Fig 1 *E*) fastening the aluminum plate to the upright bar may either be adjusted tightly so as to prevent mobility of the crutch with the forward and backward movement of the body, or fixed loosely so as to allow for such motion. (The latter seems preferable—note dotted lines *I F*, Fig 1.) A belt (Fig 1 *G*) fastened to the aluminum plate buckles around the waist, and straps extending from this plate over the opposite shoulder (Fig 2 *A*) give additional security and comfort. A strip of adhesive tape 3 inches wide is placed round a pad (Fig 2 *B*) over the arm on the injured side just below the axilla, the free end extending back under the opposite axilla and to the sternum in front.

---

[2] Besides the individually desired materials for skin sterilization, very few articles need be carried to the bedside when the methods described above are used Thus for the first type of operation the only necessary articles are (1) wrapped sterile trocar and cannula, (2) wrapped sterile flask and extra piece of tubing, and (3) spirit lamp For the second type (1) sterile case of syringe and needles, (2) sterile flask containing citrate solution, and (3) spirit lamp My experience with these two types of collecting flasks might be summed up by stating that all specimens of cerebrospinal fluid and blood, collected as described from seven patients, showed no contamination after transport from the North of Ireland to London, and that material shaken and immediately incubated remained sterile.

[3] A properly filled flask may quite safely be forwarded, provided all three exits are additionally clamped, and of course breakage guarded against by careful packing Flasks of 1,000 c.c of filtered horse serum have provided sterile enrichment fluid for culture tubes until emptied This means that small amounts have been easily withdrawn on about 200 occasions, without the stock fluid becoming contaminated. The following precautions are suggested on the avenues of infection that might be overlooked 1 In refilling the graduated tube, care should be taken that the fluid is not allowed to reach the cotton of the air vent 2 The tube to which the enriching fluid is to be added should be thoroughly flamed before being inserted within the hood, so that there is no possibility of the discharging tip becoming contaminated from the inner wall of the tube. The test tube protecting the tip and blocking the mouth of the hood should be treated in the same way before being reinserted

With this apparatus we are enabled to meet all the requirements known as cardinal principles in treatment of fracture of the clavicle, namely, bringing the arm upward, outward and backward: (1) upward by means of the crutch resting on the hip; (2) outward by means of the pneumatic cushion in the axilla acting as a fulcrum, and (3) backward by the use of the adhesive strap around the arm and fastened to the back.

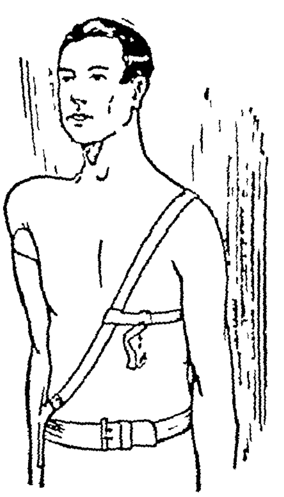


Fig 3.—Front view of patient with straps adjusted.

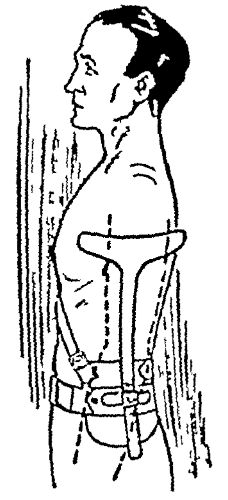


Fig 4. — Fracture crutch strapped to patient.

ADVANTAGES OF THE CRUTCH SPLINT

1. Most important of all, it is comfortable and free from the almost intolerable suffering caused by other dressings.
2. It can be used in many cases in which the Sayre or Velpeau dressings cannot be applied.
3. It can be used innumerable times.
4. It can be adjusted to any adult physique.
5. It is inexpensive.
6. It is easily applied and cannot be worked out of place by the patient as are the Sayre and Velpeau dressings on account of their discomfort.
7. There is no chafing of the skin, the parts are open to inspection, and the apparatus can be easily removed and the injured parts massaged.
8. It allows free use of the forearm and hand.
9. It applies the proper mechanics, meets all the cardinal requirements, and affords perfect immobilization.

Atypical Meningitis in Denmark.—The *Hospitalstidende* publishes a notice from the state serum institute at Copenhagen to the effect that in the towns and rural districts of Denmark there have recently been cases of cerebrospinal meningitis in an atypical form, slight or no meningeal symptoms, high fever, mild catarrh and hemorrhages into the skin, either as petechiae or blue patches, some as large as one's palm. The disease thus simulates scurvy or typhus, but the meningococcus is responsible for it, as also for certain cases with an exanthem suggesting roseola. The institute urges that spinal fluid from all such cases be sent at once for examination, and asks for the data from all such cases that have been encountered, whether terminating in death or recovery.

BACILLUS WELCHII INFECTION AND INTOXICATION *

CARROLL G. BULL, M.D., AND IDA W. PRITCHETT, NEW YORK

The problem of gaseous gangrene in connection with shot and shell wounds has been only partially solved by improvements made in the antiseptic treatment of wounds. The essential nature of *Bacillus welchii* infection has not been established, and this lack of a certain basis of knowledge has hampered progress. Whether the bacilli are mere saprophytic concomitants of an infectious process induced and maintained by other pathogenic micro-organisms, as is held by Weinberg and Seguin, or whether tissue destruction is due to a mechanical action of the gas formed, as is held by Kenneth Taylor, or whether they possess invasive powers of their own, as others believe, has not been definitely settled. The indications are, however, that the bacilli tend not to invade the general blood stream and hence do not produce a septicemia to which the severe effects often noted in gas bacillus infection may be ascribed. It would appear therefore that a form of poisoning from local action of the bacilli arises, but it has yet to be shown that the bacilli of Welch are toxin producing bacteria.

We have been able to establish this point. By cultivating the bacilli anaerobically in broth to which sterile unheated skeletal muscle of the pigeon or rabbit has been added, a highly toxic fluid is obtained. The toxicity of the fluid is independent of acid and is not essentially influenced by filtration through porcelain which removes the bacilli. The degree of toxicity is also very high if the incubation has not been continued too long. For example, 0.25 c.c. of such a filtered fluid injected into the breast muscle of the pigeon produces intense edema and degeneration of the muscle, and death in a few hours. Corresponding lesions are also produced in the guinea-pig and rabbit. In other words, aside from actual gas formation, the essential lesions arising in *Bacillus welchii* infection in animals are reproducible with this toxic fluid.

The toxic substances are thermolabile. They have been distinguished into a hemolysin which destroys the red corpuscles and another poison not acting on the blood directly, but nevertheless lethal in effects.

If rabbits and other animals are immunized with the toxic filtrate, (*a*) active immunity is produced and (*b*) an effective antitoxic serum is obtained. With the latter, infection with the bacilli and intoxication with the poison are preventable. The reaction between the immune serum (antitoxin) and toxin conform to the law of multiple proportion.

Our experiments lead us to place the pathogenic members of the *Bacillus welchii* group in the class of toxin producing bacteria and to ascribe to them invasive and poisonous properties of their own which are directly responsible for many of the severities observed in connection with the wound infections of the war. They also indicate that by suitable methods of preparation a protective and curative immune serum may be produced.

A detailed account of the experiments on which these statements are based will appear in a forthcoming number of the *Journal of Experimental Medicine*.

---

* From the Laboratories of The Rockefeller Institute for Medical Research.

Results of Tuberculosis Treatment at Home.—A report of the Association for Improving the Condition of the Poor of New York on the Home Hospital of the association has recently been issued covering a period of four years. The feature which this report particularly emphasizes is that by their plan many of the patients have been enabled to return to their work. The hospital has found that the care of children in homes where one or both of the parents are tuberculous constitutes one of its greatest problems. They find that nearly one third of the children in such families are afflicted with tuberculosis, while many more than one third are delicate or underweight. Of 140 adult patients who have been treated in the hospital for more than three months and who followed advice, only ten died and seventeen were reported as unimproved. In sixty cases the disease was definitely arrested, thirteen were reported improved, twenty-five as apparently arrested, and fifteen as quiescent.

Therapeutics

DISTURBANCES OF THE KIDNEYS

(Continued from page 1697)

TREATMENT OF PYELITIS

The diagnosis of these infections of the kidney can be determined only by the microscope, by staining the bacteria, and by cultures, which kidney, if not both, is involved must be determined by the physical examination, by the passage of the ureteral catheter, by roentgenograms and, if necessary, by pyelography All primary infections or localized infections in other parts of the body must be discovered and removed, if possible

Whatever the germ or germs may be that are causing the infection, the objects aimed at are (1) good circulation in the kidneys, (2) prevention of absorption of toxins and germs from the intestine, (3) free drainage, and (4) modification of the character of the urine

1 It is essential that the circulation in the involved kidney should be as perfect as possible, hence, if the kidney is displaced, it should be held in proper position If the general circulation is poor, it should be improved by digitalis or by some other method Ordinarily, it is not advisable for such a patient to remain in bed, as bed rest tends to increase the congestion of the kidneys, better drainage from the pelvis of the kidney is secured when the patient is up and about

2 The bowels should be moved freely every day Whether a saline laxative or a vegetable laxative should be used will be determined by the needs of the individual patient The diet should be one which tends to cause the least intestinal fermentation It may be advisable temporarily to change the diet radically from a mixed to a vegetable, or a milk diet It may be well to give yeast or lactic acid bacilli

3 To meet the third indication the patient should drink plenty of water to dilute the urine and to wash out more effectively any debris that may have been deposited in the pelvis of the kidney, whether bacteria alone, or pus, mucus and bacteria

4 If the urine is very acid, especially if there is bladder irritability, it may be well to give an alkali for a short time, such as potassium citrate in 2 gm doses, but this alkali should not be given over a long period of time, nor should the urine be allowed to be long alkaline, as most germs grow better in an alkaline medium Sometimes much of the bacilluria disappears when the urine is made normally acid Hence if the urine is alkaline in a bacilluria (which is generally not true when there is kidney pus), dilute hydrochloric acid should be given after meals The dose need not be large — from 5 to 10 drops

Perhaps the best germicidal treatment is hexamethylenamin, in a dose of 0 5 gm (7½ grains) in water four times a day It has been stated that to be antiseptic in the pelvis of the kidney the dose of hexamethylenamin must be much larger than this, but most persons tolerate a larger dose than the one named only for a short time This drug may cause some bleeding from the kidneys, uretal pain and bladder irritation When hexamethylenamin is prescribed, an alkali should not be given

If this treatment, which is the best, does not succeed, or if for any reason hexamethylenamin disagrees with the patient, phenyl salicylate may be given in 0 25 gm doses, in capsule form, four times a day This is sometimes successful in mild cases of bacilluria Santal oil has also been used

This treatment is frequently successful in more or less permanently curing a bacilluria, at times it is used with success in treating a mild purulent infection of the pelvis, and it is also possible to evacuate and heal a small abscess of a kidney in this manner

On the other hand, most purulent kidneys are difficult to treat Both stock and autogenous vaccines have been used with varying success, perhaps the most usual result is failure

A more radical treatment is to wash out the pelvis of the kidney through the ureteral catheter with boric acid or a silver solution

Geraghty[127] finds that in simple pyelitis renal pelvis lavage is of great value, and he uses either a silver nitrate solution or a weak solution of formaldehyd He injects into the kidney pelvis from 5 to 10 c c of a 0 5 per cent silver nitrate solution, and passes the catheter only a short distance into the ureter for the purpose of treating a coincident ureteritis at the same time The strength of the injection is gradually increased until it has reached 5 per cent The increase is gradual to obtain tolerance

It can be readily understood how frequently little pockets of pus — which may be discovered by pyelography — may be located in the kidney tissue around the pelvis When such small abscesses are present, even with injections, the cure may be slow and imperfect, and they may readily recur

Geraghty believes that when there is considerable pelvic dilatation, pelvic lavage is of little value He has also advantageously used formaldehyd solution, from 1 part to 5,000 parts of water, to 1 part to 2,000 parts of water

Kretschmer and Gaarde[128] believe that many cases of pyelitis in adults, especially when it occurs during pregnancy, represent exacerbations of a pyelitis of infancy which has remained latent for years They believe that chronic colon pyelitis which has resisted medicinal treatment is best treated by pelvic lavage with a 1 per cent solution of silver nitrate, they reject the stronger solutions suggested by Geraghty If there is much pus in the pelvis of the kidney they wash it out first with a weak boric acid solution They use, on an average, from 5 to 7 c.c of a 1 per cent silver nitrate solution, and repeat the injections at five or six day intervals until the urine is sterile and free from pus The number of injections required in each case in the fourteen cases of pelvic lavage summarized varied from one to eight In these fourteen cases they reported eleven cures, as proved by negative cultures All injections must be given slowly, and actual distention of the pelvis avoided

Murphy[129] believed that though vaccines often fail, they are frequently of great value in genito-urinary infections He condemned their indiscriminate use, however, as in obstructive pyelitis, but advised the use of vaccines in infection with free drainage when the condition of the patient was satisfactory He recommended caution in dosage, and began with 100 million dead bacteria as the first dose, increasing this number rapidly until there was a reaction He stopped the treatment from three to eight days and then give the same or a slightly increased dose, according to the previous reaction A severe headache or a temperature of 102 indicates a smaller dose, and the largest dose should not exceed 30 billion bacteria The injections should be given deep into the muscles, and slowly When more than 10 billions are given at once they should be injected at two or three separate points Of course smaller doses may be given intravenously A severe local reaction should not alarm, although these injections may cause necrosis of tissue

---

[127] Geraghty, J T The Treatment of Chronic Pyelitis, The Journal A M A, Dec. 19, 1914, p 2211

[128] Kretschmer H L, and Gaarde F W The Treatment of Chronic Colon Bacillus Pyelitis by Pelvic Lavage, The Journal A M A June 24 1916 p 2052

[129] Murphy, J B Interstate Med Jour, November 1914 p 121

Murphy obtained the best results in colon bacillus infections He believed that if the infection of the kidney came by way of the blood, the trouble would be in the parenchyma of the kidney and the microscopic examination of the urine might suggest the depth of the location of the infection in the kidney substance by the character of the epithelial cells If an infection reached the kidney from below by way of a dammed back urine, the pelvis would of course be infected first He also recognized the lymphatic route of infection from the pelvis or other parts of the abdomen

If an autogenous vaccine cannot be produced from the infecting bacteria in the urine or from some localized infection like that of the prostate, it may be isolated from the blood serum or from an infection in some other part of the body if such causative localized infection is present The tonsils, the sinuses adjacent to the nose and the gums and teeth should be studied for possible sources of infection

While the most frequent germ of infection is the colon bacillus, the staphylococcus, the streptococcus and the gonococcus are also not infrequent infective agents Ramsey[130] found that in 100 cases of infection ninety were caused by the colon bacillus

If a purulent kidney does not improve rapidly if the patient is becoming debilitated, or if the kidney is found enlarged and examination of the urine from this kidney shows that the kidney structure is diseased temporizing should cease, and the kidney should be removed, unless the other kidney is so diseased as to render the operative danger very great

(To be continued)

---

[130] Ramsey St Paul Med Jour 1914 **10**, 343

Mortality from Cancer—The Bureau of the Census has just issued a monograph compiling and analyzing under twenty-nine separate headings deaths from cancer in the registration area of the United States in 1914 The total number of deaths for that year from cancer and other malignant tumors, in the registration area was 52,420 the estimated population of this area being 66.8 per cent. of the total population As a result of investigation of the reports as originally made to the bureau, the diagnosis of cancer was determined to be reasonably certain in 30 555 instances, or 58 3 per cent. of the total, 14 404, or 27 5 per cent., were regarded as uncertain, and in 7 461 or 14.2 per cent. the diagnosis was classified as unknown It is on this basis that the analysis of the cases was made. The increase in cancer in the United States is indicated by the mortality figures taken from the registration area as it existed in the several years mentioned, as follows 1906 29 020 a rate of 69 1 per hundred thousand of population, 1907, 30 514, rate 70 9, 1908, 33,465, a rate of 71 5, 1909, 37,562, a rate of 73 8, 1910 41 039, a rate of 76 2 1911, 44,024, a rate of 74.3, 1912, 46 531, a rate of 77 0, 1913, 49 928, a rate of 78 9, 1914, 52,420, a rate of 79 4 Of the deaths in 1914, it is said that 19 889 or 37 9 per cent, were due to cancer of the stomach and liver, and 8 152, or 15 6 per cent, to cancer and other malignant tumors of the female genital organs

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION W A PUCKNER, SECRETARY

THORIUM NITRATE—Thorii Nitras —$Th(NO_3)_4 + 4H_2O$—The thorium salt of nitric acid

Actions and Uses—The soluble thorium salts bear a close resemblance to alum in their local astringent and irritant properties They are not absorbed from the alimentary canal Hypodermically they cause local sloughing and intravenously they kill by coagulating the blood The nonprecipitant double salts are practically nontoxic even intravenously They are excreted by the kidneys Thorium salts are fairly radioactive They have been recommended for local application in malignant diseases and thorium emanation has been inhaled in phthisis Reliable evidence as to other therapeutic uses of thorium salts is lacking

Thorium nitrate occurs as white crystalline granules or lumps Very soluble in water and alcohol On calcination it yields a voluminous white oxide which should amount to from 48 to 50 per cent of the original salt The aqueous solution dries over sulphuric acid to a crystalline mass

An aqueous solution gives a white precipitate with ammonium carbonate the precipitate being completely soluble in an excess of the precipitant The aqueous solution gives with caustic alkalies a voluminous precipitate of the hydroxide insoluble in an excess of the precipitant The presence of tartaric or citric acids prevents the precipitation Potassium ferrocyanide produces an amorphous precipitate

THORIUM SODIUM CITRATE SOLUTION—Prepared by dissolving thorium nitrate 10 Gm, and sodium citrate, 15 Gm in water to make 100 Cc

Actions and Uses—The citrate of thorium and sodium is opaque to the Roentgen rays It is used especially in the diagnosis of diseases of the renal pelvis and urinary bladder

Dosage—This solution is employed chiefly for cystograms It should be sterilized by boiling before use

According to the method of J F Burns (THE JOURNAL June 26 1915 p 2126) to make 100 Cc of the solution 10 Gm of thorium nitrate are dissolved in as little distilled water as possible to this solution kept hot on a water or steam bath are added 30 Cc. of a 50 per cent solution of sodium citrate the additions being made in small quantities and care being taken to shake the solution thoroughly after each addition This solution is then made neutral to litmus by the careful addition of a normal solution of sodium hydroxide and made up to 100 Cc with distilled water On filtration a clear limpid solution is obtained which when sterilized, either by boiling or steam under pressure is ready for use

Thorium Solution for Pyelography, H W & D, 10 per cent—This solution has the composition and is prepared according to the method given for thorium sodium citrate solution

Prepared by Hynson Westcott and Dunning Baltimore No U S patents or trademarks

STRONGER THORIUM SODIUM CITRATE SOLUTION—Prepared by dissolving thorium nitrate, 15 Gm, and sodium citrate 22 5 Gm, in water to make 100 Cc

Action and Uses—The double citrate of thorium and sodium is opaque to the Roentgen rays It is used especially in the diagnosis of diseases of the renal pelvis and urinary bladder

Dosage—This solution is employed chiefly for uretero-pyelograms It should be sterilized by boiling before use

According to the method of J E Burns (THE JOURNAL June 26 1915 p 2126) to make 100 Cc of the solution 15 Gm of thorium nitrate are dissolved in as little distilled water as possible to this solution kept hot on a water or steam bath are added 45 Cc of a 50 per cent solution of sodium citrate the additions being made in small quantities and care being taken to shake the solution thoroughly after each addition This solution is then made neutral to litmus by the careful addition of a normal solution of sodium hydroxide and made up to 100 Cc with distilled water On filtration a clear limpid solution is obtained which when sterilized, either by boiling or steam under pressure is ready for use

Thorium Solution for Pyelography, H W & D, 15 per cent—This solution has the composition and is prepared according to the method given for stronger thorium sodium citrate solution

Prepared by Hynson Westcott and Dunning Baltimore. No U S patents or trademarks.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET CHICAGO, ILL

Cable Address "Medic, Chicago"

Subscription price Five dollars per annum in advance

Contributors, subscribers and readers will find important information on the second advertising page following the reading matter

SATURDAY, JUNE 16, 1917

THE EXPERIMENTAL PRODUCTION OF CANCER

It has long been evident that many questions concerning the etiology of cancer would not be answered until this disease could be produced experimentally at will This accomplishment would make possible the study of the development of the growth step by step, the determination of the factors necessary to incite malignant proliferation, and, evidently, the simultaneous exclusion of unessential or unimportant possible factors In view of the importance of the subject, it would seem that surprisingly little systematic attempt has been made to accomplish the experimental production of cancer, as far as the literature shows, but it is probable that many more or less extensive experiments have been attempted that have never been reported because of the failure to accomplish their object Of late years, experimental cancer research has concerned itself chiefly with the transplantable tumors, especially of mice, rats and fowls, but always with the recognition that this was quite a different thing from the production of a spontaneous tumor in an animal through malignant transformation of its own cells Transplanted tumors have afforded much information concerning the general biology of cancer, but this information bears only indirectly on the solution of the etiology of cancer

Among the recorded attempts to produce cancer in animals, perhaps the work of Bernhard Fischer is best known Fischer obtained marked epithelial overgrowth and invasion of the subepithelial tissues with epithelial cells in response to the stimulation produced by fat-soluble dyes, notably scarlet red But although this overgrowth often resembled carcinoma in its general histologic features, true cancer was never produced, for the growth stopped spontaneously when the effect of the dye was exhausted, and did not progress or produce metastasis as a true cancer should More recently Fibiger[1] obtained actual carcinomatous growths in the stomachs of rats that had eaten roaches infected with a parasite (*Spiroptera*) which grows in the rat's stomach and stimulates the growth of the epithelial lining Fibiger has reported producing six definitely carcinomatous growths among many simple papillary hyperplasias, and of these, four produced metastases This set of observations parallels the production of cancer in the urinary bladder as a result of infection with *Bilharzia* in man It may be fairly called the first successful series of experiments leading to the intentional production of cancer, but it leaves much to be desired as a method of research, largely because the exciting agent is not capable of exact control The experimenter can merely feed infected roaches to rats, but the degree of infection of the rats, its site, and the presence of other factors that may influence the process are entirely beyond his control

In human pathology we have certain forms of irritating or stimulating agents that experience has taught are peculiarly likely to incite cell proliferation that terminates in malignant growth Most conspicuous of these are the Roentgen rays, which have had many victims of skin cancer, yet, as far as we know no one has produced cancer intentionally in animals by the use of this agent Certain types of chemicals also have a similar effect in man, notably tar, pitch, paraffin, soot, and certain anilin dyes By taking advantage of this property of tar, Yamigawa and Ichikawa[2] in the University of Tokyo have now succeeded in causing the production of marked epithelial overgrowth in the ears of rabbits with great regularity, and often the formation of true squamous cell cancers The method of procedure consisted simply in painting coal tar on the inner surface of the ear every two or three days for from fifty to 400 days This stimulates the epithelium, especially of the hair follicles, and hornified retention cysts are formed After from thirty to sixty days there appear minute nodules that consist of growths derived from the hair follicle epithelium, which may take either a polypoid or a verrucose form, and some of the latter growths develop to cutaneous horns if the application of tar is stopped The verrucose growths, under continued stimulation, may assume an infiltrative character, invading even the ear cartilage, growing into the lymphatics and veins, and in two instances at least in this series, producing metastases in the regional lymph glands In other words, these growths recapitulate in all essential respects the ordinary skin cancers arising in the human skin as a result of protracted stimulation, whether from light, mechanical or chemical irritation The Japanese investigators have made possible the production of cancer at will in experimental animals, and thus extend greatly the possibilities of cancer research

The bearing of their observations on the question of the infectious etiology of cancer is interesting and important Although untold thousands of rabbits have been observed in laboratories, no case of spontaneous tumor of the ear in rabbits seems ever to have been reported, in fact, rabbits are less subject to tumors of any sort than almost any other domestic animal Nevertheless the opportunity for a cancer parasite, if such there is, to obtain entrance to the tissues of the rabbit's ear are unsurpassed, between the common use of metal tags in the ears for identification, of notching the ears for the same purpose, and needle punctures for bleeding or inoculation, to say nothing of the universal use of the rabbit's ears as a convenient handle In contrast to the complete exemption of the rabbit's ear to cancer in spite of these opportunities for infection we find that deliberate stimulation of epithelial growth by a chemical mixture of considerable bactericidal strength leads regularly to a hyperplasia of epithelium which commonly assumes a neoplastic character, often malignant The least one can say is that these experimental cancers add one more to the numerous features of cancer growth that are extremely difficult to ascribe to an infection, and readily explained as the result of protracted nonspecific stimulation of cell multiplication

---

[1] Fibiger, J Ztschr f Krebsforsch, 1914, **14**, 295

[2] Yamigawa, Katsusaburo, and Ichikawa, Koichi Experimentelle Studie uber die Pathogenese der Epithelialgeschwulste Mitt [illegible] Fak d k Univ Tokyo, 1915, **15**, 295 344, 1917, **17**, 19 67, Ja [illegible] Ztschr f Krebsforsch, 1916, **10**, No 4

THE LIFE OF THE RED BLOOD CORPUSCLES AND "BILE CIRCULATION"

It is generally accepted that the red blood cells of the body have a comparatively brief existence These corpuscles are believed to be disintegrated somewhere in the circulation When the evidence for this widely taught belief is carefully examined, however, it appears to be extremely indirect and circumstantial in character The fact that the mammalian erythrocyte is assumed to be a cell which has lost its nucleus has been cited in favor of the probability of a brief survival for the denucleated structure[1] The experiment has been made to determine the length of time during which foreign corpuscles, such as those of birds, can be recognized after injection into the circulation of a mammal Such a method of investigation has properly been designated as beside the mark, because these foreign cells will be destroyed by the serum and rapidly taken up, like other foreign particles, by the phagocytes of the body Nevertheless the destruction of red blood cells sooner or later is presaged by the fact that these are often found engulfed in large cells of various tissues and organs, such as the spleen and hemolymph glands, so that pigment granules supposedly obtained from the disintegration of the red corpuscles can often be recognized

A further widely accepted belief looks on free hemoglobin, the characteristic constituent of the red blood cells, as the mother substance from which the bile pigments are generated The latter are thus looked on as the most significant derivatives of the blood pigment The chief place of disintegration of the hemoglobin has been assigned to the liver, the organ in which the pigmentary residue is supposed to be converted into bile pigment Injection of hemoglobin into the circulation is reported to lead to an augmentation of bile pigment in the secretion from the liver The administration of hemolytic poisons, such as phosphorus, arseniuretted hydrogen, and toluylendiamin, results in an icterus which has been argued to be hepatogenous, rather than hematogenous in character The biliary passages, so the assumption goes, are unable to eliminate the undue amounts of bile pigments produced in the liver from the excess of liberated hemoglobin, so that there is an abnormal reversed discharge of the bile pigment back into the blood Further, it has been stated that injected bilirubin is promptly excreted into the bile as well as by the kidneys

Although no one actually knows just when and how red corpuscles go to pieces, the assumption that their pigment ultimately appears in the bile in the new guise of bile pigment has enabled a calculation of the probable life of the corpuscles to be made An element of obvious error creeps in owing to the uncertainty as to the actual amount of end-product, that is, bile pigment, formed and excreted daily Nevertheless the estimates made have placed the amount of hemoglobin disintegrated daily at one tenth of the total present in the body The total life of the red corpuscle, on this hypothesis, cannot exceed ten days[2]

The fundamental basis for all of the foregoing conclusions regarding the short cycle of the red blood corpuscles, let us reiterate, is the assumption that the bile pigments are formed from hemoglobin If there is a suspicion, to quote Hooper and Whipple,[3] that other substances than hemoglobin may be formed into these end-products or that some of the used up hemoglobin may not be formed into this end-product, we may also question the life cycle of the red cell as determined in this manner At least we may say that there is a possibility of error, and assume that the life of a red cell may be normally more than from ten to fourteen days Whipple and Hooper,[4] in an elaborate series of investigations on dogs with biliary fistulas, have found that blood feeding has no influence on the secretion of bile pigment in the normal dog Whole blood of the sheep, pig or ox, freshly defibrinated, given to the dog by stomach tube does not influence the output of bile pigments or the volume of bile Freshly laked dog red cells given by stomach tube likewise have no effect on bile secretion Cooked pig blood and digested ox blood have not the slightest influence on the output of bile pigments There is no immediate effect nor any delayed influence on the bile secretion It seems safe to assume that during the period of observation a certain amount of this material was digested, and its constituent parts taken in through the intestinal mucosa Splenectomy has no effect on these blood feeding experiments

---

[1] The debatability of part of this hypothesis has already been referred to (The Origin of Red Blood Corpuscles editorial The Journal A M A, June 2 1917 p 1629

[2] Howell W H Textbook of Physiology 1913 p 430

[3] Hooper C W and Whipple G H Bile Pigment Metabolism IV Influence of Fresh Bile Feeding upon Whole Bile and Bile Pigment Secretion Am Jour Physiol, 1917 **42**, 264

[4] Whipple G H and Hooper C W Bile Pigment Metabolism III Bile Pigment Output and Blood Feeding Am Jour Physiol 1917 **42**, 256

The skepticism regarding the direct interrelation between blood pigment and bile pigment thus raised by these investigations is augmented by other unexpected findings To one who has been trained to accept the "circulation of the bile," by which is meant reabsorption from the intestine and reexcretion by the liver, it will come as a surprise that these experiments afford no evidence of this Feeding fresh bile usually causes a fall in the output of bile pigments in spite of the cholagogue action Pig bile, as a rule, is most active in this respect and may depress the bile pigment curve to less than half normal. Ox and sheep bile may have the same effect Dog bile often causes only a slight fall in bile pigment output, but may depress the curve to 50 per cent of normal

Addis[5] has suggested as an outline of the life history of the blood pigment that the hemoglobin is changed in the liver to bile pigments, and excreted into the intestine The bile pigment is reduced to urobilinogen in the intestine, a part escaping in the feces, and an important part being absorbed into the blood, polymerized into urobilin-complex, and taken up by the liver This portion is stored in the liver or synthesized into hemoglobin, or, if the liver is abnormal, may escape into the blood and appear in the urine as urobilinogen This hypothesis, in a word, is "bile circulation" again presented in a more elaborate form — a circulation of a pyrrol complex Hooper and Whipple[3] believe, however, that their observations exclude the possibility of bile pigment absorption from the intestine There is no evidence to support the theory of "bile pigment circulation" Their latest experiments give no support to Addis' theory of pigment conservation, urobilinogen absorption from the intestine and synthesis toward hemoglobin It is suggested that urobilinogen may be formed in other body tissues rather than absorbed from the intestine

The negative findings respecting the influence of either blood feeding or bile feeding in the direction of increasing the output of bile pigments from the liver are presumably attributable, if correct, to more careful methods of observation than have heretofore been employed They must not be interpreted to mean that the production of bile pigments is an utterly undeterminable factor. It now seems probable that the liver has some constructive ability in pigment formation which can be modified by diet According to Whipple and Hooper,[6] carbohydrates stimulate the excretion of bile pigments in bile fistula dogs Intravenous injections of dextrose act in the same way as a large dose of sugar by mouth, whereas a meat diet will lead to a depression of the average bile pigment elimination found on a healthy diet Here are further contentions which tend to upset many cherished beliefs

THE NEPHRITIS PRODUCED BY OXALIC ACID

Comparisons recently made of the relative behavior of a number of organic acids — oxalic, tartaric, citric and malic acids — in the body[1] have suggested that the variations in toxicity and other features of physiologic deportment are doubtless associated in some degree with the comparative readiness with which they are destroyed in the organism Nevertheless the differences shown by compounds having many features of resemblance in respect to chemical structure or physicochemical behavior are often so inexplicable as to demand specific consideration for each substance in place of the more general attempt at interpretation in a distinctly systematic plan Thus it has been found that whereas administration of tartaric acid in an experimental way may give rise to a marked nephritis, even considerable amounts of malic acid salts do not give rise to such untoward results

Oxalic acid has many properties in common with tartaric acid Oxalate solutions precipitate calcium from its salts Since it is well known that calcium is an essential component of living protoplasm, the suggestion has frequently been made that the oxalates exert their baneful influence in the body not through any direct toxic action on the protoplasm, but rather by precipitating its constituent calcium and thus altering the normal integrity of cellular constituents In support of this is the fact that administration of calcium salts will often restore the damage done by oxalates in the body Of course such beneficial effects may be due merely to the removal of harmful oxalates by precipitation in the tissues rather than to the actual supply of desired lime The interpretation is still somewhat problematic

In explaining the genesis of tartrate nephritis, Umeda and Ringer[2] have pointed out that tartaric acid does not readily pass through the animal membranes or cells This is known from the fact that the salts of tartaric acid, when given by mouth, are but slightly absorbed, and act as cathartics They reasoned that, since the kidney cells are more permeable to salts than are the ordinary cells of the body, and since tartaric acid forms a salt with calcium which has a low degree of solubility, the tartaric acid, while passing through the kidney cells, in all probability combines with the calcium salts of the kidney cells, forming an insoluble calcium tartrate, which becomes precipitated in the body of the cell and thus causes the complete destruction of the cell

---

[5] Addis, Thomas A Working Hypothesis of Hemoglobin Pigment Metabolism, Arch Int Med, March 1915, p 41

[6] Whipple, G H, and Hooper, C W Bile Pigment Metabolism II, Bile Pigment Output Influenced by Diet, Am Jour Physiol, 1916, 40, 349

[1] The Behavior of Three Organic Acids in the Body editorial The Journal A M A, March 31, 1917 p 984

[2] Umeda N, and Ringer, A I Studies in Experimental Ne Proc Soc Exper Biol and Med., 1916 14, 33

If this argument is tenable, the administration of oxalic acid also should be followed by an impairment of the kidney tissues It has long been recognized that most of the oxalate ingested appears in the urine in the form of calcium oxalate Insoluble crystals of the latter are often deposited along the urinary tubules and may stop them up so as to cause anuria, congestion and inflammation of the kidney Small oxalate calculi with these renal changes have sometimes been the only indications of lesions found at postmortem examinations in oxalate poisoning But Umeda and Ringer have now studied more carefully the minute histology of the kidney in fatal cases of experimental administration of potassium oxalate From their observations it appears that oxalic acid in small quantities produces nephritis similar to that of tartaric acid From this it is concluded as reasonable that tartaric acid and oxalic acid exert their influence on the kidney tubules by precipitating the calcium salts in the cells, during the process of their excretion

EFFECTS OF OCCLUSION OF BLOOD VESSELS IN MAN

Studies on animals have shown that the blood pressure may be changed either by alteration of the peripheral resistance, that is, the ease with which blood can escape from the arterial to the venous side of the circulation, or by modifying the output of the heart Every constriction of the smaller branches of the arterial system results not only in an increase in the peripheral resistance but also in a diminished capacity of the entire blood system Consequently the arterial pressure is raised at the same time as the mean systemic pressure Such a change nearly always associates with it some corresponding alteration in the heart beat also, several factors, therefore, may cooperate in the production of a rise or fall of blood pressure

Investigation of the effects of occlusion of blood vessels on the general blood pressure has now been extended to man by Elliott,[1] at the Physiologic Department of the Washington University, St Louis The principal method consisted in applying different known pressures to the vessels of both thighs while following the arterial pressure in the brachial artery by the continuous oscillatory method It was found that circular compression of the thighs causes a rise in blood pressure, larger and more immediate at the higher than at the lower compressions This is due to the increase in arterial resistance, modified somewhat at the lower compression pressures by the venous effect The heart rate is somewhat slowed Decompression of the thighs causes a fall in blood pressure, more immediate and more profound than the rise due to compression This effect is likewise more marked at the higher compression pressures, and is modified slightly by the venous accumulation in the legs The heart rate is somewhat accelerated The removal from the circulation of man of 64 c c of blood does not change appreciably the arterial pressure A slight external pressure, even less than the diastolic pressure, on an artery may under certain circumstances materially diminish the flow through it There was no evidence that compression of an arm, as in making blood determinations on man with the aid of a sphygmomanometer cuff, produces any essential effect on general blood pressure

The results here recorded indicate the accord of the hemodynamic phenomena in experimental animals and man so far as the occlusion of blood vessels is concerned They have been further substantiated by Elliott's observations in a case of femoral arteriovenous aneurysm whereby a communication existed between the femoral artery and vein This connection could be interrupted by pressure with the fingers over the site Closure produced a tremendous rise of blood pressure and a slowing of the pulse rate Opening the communication caused a fall in blood pressure and an acceleration of the heart, and restored the original conditions It is evident, Elliott remarks, that in closing the communication we are shutting off the easy path of the blood into the veins and hence back to the heart, thus relieving the heart and indeed the entire venous system of an abnormally high pressure At the same time the peripheral resistance is greatly increased Opening the communication, of course, has the opposite effects It seems fair to conclude that the changes in blood pressure here observed must be due to the changes in arterial resistance, as there seems to be no reason for believing that reducing the venous pressure and, for a time at least, the volume of blood supplied to the heart would cause the arterial pressure to rise The slowing of the heart rate observed on closing the arteriovenous opening was probably due to stimulation of the vagus center by the increased pressure In any event, the facts observed in this patient are in accord with the familiar observations of a slowing of the heart beat induced by high blood pressure — a variation long believed to be due to a stimulation of the cardiac nerves

---

Antenatal Influence —Antenatal influence has been in the past the unknown quantity, so little suspected that to some it has been the imaginary quantity, which has set its mark on health and disease after birth, mystifying the clinician, complicating his diagnosis, falsifying his prognosis, and disappointing his treatment It was always present, sometimes acting benignly as a kind of physiologic mascot handed down from a clean-living parent, at other times coming more prominently into action as a malign weapon of degeneration forged by a father or a mother without what may be termed a racial conscience At all times it confused the issue, introducing an uncertainty into the course of events which more than anything else kept the teachable physician humble, and confounded the most confident expectations of the arrogant and proud practitioner —J W Ballantyne, M D, F R C P E, *Edinburgh Med Jour* May, 1917

---

[1] Elliott B L. Observations on the Effects of Partial and Complete Occlusion of Blood Vessels on the General Blood Pressure in Man Am Jour Physiol 1917 **42**, 290

Current Comment

JUSTICE TO THE PHARMACIST

The letter in the Correspondence department of this issue from Mr John W England, secretary of the council of the American Pharmaceutical Association, calls attention to an anomalous state of affairs Physicians, dentists and veterinarians are officially recognized by the government as men of special training, whose technical knowledge can be of use to the nation in time of war Provision is made so that men in these three professions can be enrolled as commissioned officers and their skill thus most efficiently used by the Army The pharmacist, however — as a pharmacist — is utterly ignored If he enlists he does so as a private So far as official recognition of it is concerned, the science and art of pharmacy might not exist for the Army Today, as never before, victory in war goes to the nation that most effectively conserves the health of its fighting men The physician is now of such military importance that the medical profession will be called on to make no inconsiderable sacrifices It will materially lighten the arduous duties and responsibilities of the physician to have in the Army trained pharmacists who will be able to give intelligent cooperation But it is imposing too great a strain on the patriotism of those whose special knowledge is obviously a large asset to the Army, to expect them to enlist as privates without any recognition of their national worth Pharmacists should be given a rank commensurate with their importance, first because it is but simple justice to the pharmacists themselves, secondly, because the usefulness of the medical corps will be greatly augmented and, lastly, and most important, because the efficiency of our Army demands it.

THE NEW YORK SESSION

Notwithstanding the war, the 1917 Annual Session held in New York last week was a success The registration, 5,147, makes it second only to the Chicago session of 1908, at which the attendance was 6,466 The new features of this session were that Monday and Tuesday were devoted to the meetings of the House of Delegates, which was presided over by a chairman of its own election, leaving the President of the Association free to meet the many appointments which command his time during the session With these two days at its command, the House transacted the major portion of its work before the opening of the Scientific Assembly so that the delegates were privileged to attend the scientific meetings not only to their pleasure and benefit, but also to the advantage of the scientific program The Scientific Assembly opened with the general meeting, as usual, but this was held on Tuesday evening instead of during the morning of the first day of the Assembly The success of this meeting in New York proved the wisdom of this change in the program for the week's convention Reports from all the sections show that the attendance was good, the papers excellent and the discussions interesting The arrangements for housing the sections provided for their close grouping, they were located in five of the larger hotels and the building of the New York Academy of Medicine. The greatest distance between these meeting halls was ten or eleven blocks, and in certain of the hotels there were from two to four Sections This made the Sections quite accessible one to the other, and undoubtedly accounts for the large attendance at the various meetings The New York physicians, especially those of greater New York City, hospitably received the Fellows and their guests A notable feature provided by the local profession was an extensive series of clinics given during Monday and Tuesday The large registration during these two days — 3,783 — shows the interest taken Instead of the reception which is usually tendered to the President of the Association, a patriotic rally was held on Thursday evening in the Hippodrome, a full report of which appears in this issue In addition, on Wednesday evening, meetings were held both in the grand ballroom of the Waldorf-Astoria and in the north ballroom of the Hotel Astor, at which there were presented questions relative to the medical conduct of the war Many of the papers and the discussions in the Sections, as well as the address of the President, evidenced the intense interest of the medical profession in the nation's crisis

UNDERLYING PRINCIPLES OF WORKMEN'S COMPENSATION LAWS

A report recently issued by the National Industrial Conference Board of "Workmen's Compensation Acts in the United States" again calls attention to some of the underlying principles of this form of legislation, which has developed so rapidly in the last eight years While the laws themselves have aroused a considerable degree of opposition, especially among physicians, the criticisms have been largely aimed at administrative details rather than at the underlying principles on which such legislation is based. In order to keep these principles clearly in mind, it is desirable that they should be reiterated and emphasized at frequent intervals For this reason, the report of the conference board is of interest and value In the report, the vital principle of workmen's compensation laws is clearly set forth, namely, "the substitution of a definite and certain measure of relief for the former uncertainties of redress through litigation" Under the old system whereby each claim had to be settled as a separate lawsuit and in which the principles of the old English common law, complicated by the legal theories of contributory negligence, fellow servants' responsibility and voluntary assumption of risk, the chances of injured employees ultimately receiving any fair compensation for their injuries were slight Even when the plaintiff received a considerable award at the hands of the jury, the greater part of it was consumed in legal expenses Under the workmen's compensation laws, a limited but certain wage payment is made promptly to injured employees, regardless of the question of responsibility or fault Under the old system it was necessary to prove who was at fault for each industrial accident Under the new method the question of fault is ignored industrial accidents being regarded as necessary incidentals to industrial activity, and those suffering from them being regarded as entitled to compensation as a public necessity rather than as the redressing of a private wrong The fact that, in the past eight years, thirty-seven states and four territories have adopted such laws, and that the federal government has passed a compensation act for its employees, is abundant evidence of the advantages of the new method over the old The principles of workmen's compensation now apply to more than two thirds of the wage earners in the United States The medical profession has been slow to realize the significance and importance of such laws, and in most of the states allowed them to be enacted without paying attention to the terms of service or compensation provided for physicians As a result, when the laws were put into operation, their provisions were found to be extremely unsatisfactory It is now necessary in each state to remedy these defects and write into the laws in the form of amendments the provisions which should have gone into the original draft The inequity of the medical provisions in most of these laws, however, should not blind physicians to the fact that the underlying principles of workmen's compensation laws are essentially sound and are a marked advance over previously existing conditions Amendments securing to physicians their proper rights and privileges should without question be adopted, but it is not necessary to burn down the house in order to kill the rats A clear distinction should be made between the essential and fundamental principles of workmen's compensation legislation and the secondary details of administration which can and should be modified in any case in which they work a hardship on any class connected with the administration or operation of the law

THE PRESIDENT-ELECT

The medical profession will view with the highest degree of pleasure and satisfaction the recent selection of Dr Arthur Dean Bevan as President-elect of the American Medical Association Nor has that highest honor of the Association ever been bestowed on one more worthy to receive it Dr Bevan is 56 years old graduated from Rush Medical College in 1883, was an officer in the United States Marine Hospital Service and professor of anatomy at the Medical Department of the University of Oregon until 1887 He was then elected to the chair of anatomy in Rush Medical College, which position he held until 1899, when he was made associate professor of surgery In 1902 he was made full professor and head of the department of surgery, which position he still holds He was a member of the House of Delegates of the American Medical Association in 1902 and chairman of the Section on Surgery in 1906 As a member of the House of Delegates he was made chairman of the Committee on Medical Education which, a year later, recommended the establishing of a permanent council in place of the temporary committees which had previously attempted to bring about improvements in medical education When the Council was established in 1904 Dr Bevan was made its chairman, which position he has held since that time It was through his high ideals and the force of his personality, together with his straightforwardness and sense of fairness, that many of the measures of the Council were carried through to a successful conclusion The improvements in medical education since the creation of the Council on Medical Education are too well known to need further comment here It is sufficient to say that there has been no work undertaken by the Association of more vital importance to the medical profession and the public than that which has been accomplished by this Council which, from its beginning, has been so ably directed by Dr Bevan

PRESIDENT-ELECT ARTHUR DEAN BEVAN

Medical Mobilization and the War

Camps of Instruction for Medical Officers

The following outline of the course of instruction for medical reserve officers is taken from an article in the *Military Surgeon*, by Col E L Munson, M C, U S Army, who was recently appointed head of the division of medical military instruction

The object of the proposed training is to supply the knowledge which will enable the new officer not alone to work under the direction of more experienced officers, for we have not a sufficient number of such, even to direct, but to perform their duties independently, to, in their turn, supervise others and transmit their knowledge to their subordinates, both commissioned and enlisted There is an ancient service adage to the effect that good officers can always make good soldiers The converse of this does not hold true So we must start with good officers if we are to be efficient

As all our officers necessarily have the essential medical foundation and are professionally competent, no instruction need be given in purely professional matters Moreover, the training must be practical, and only so much theoretical instruction given as is necessary to elucidate the subject There will, of course, be lectures on special subjects, map problems, war games, demonstrations, etc

It will not be practicable to send all of the newly commissioned medical officers to the designated camps of instruction, not a few of them must at once be assigned to service with troops, who will require their professional services, irrespective of their lack of knowledge of the military environment The training of such officers will have to be systematically done under the supervision of the responsible medical officer of the command, who, doubtless, will almost always be a trained man Such training must be carefully supervised, as there is always a tendency to subordinate it to existing duties Both must receive a due measure of attention

The following is an approximately accurate outline of what will be done in the training camps

The course is intended to give the student officers a general idea of the basic duties of a medical officer and prepare them for service with troops in the field Training will be intensive and pushed as rapidly as possible It will be borne in mind that the services of thousands of instructed medical officers must be available at an early date

The training to be given is intended to prepare these officers to conduct the service of the medical department without either the supervision of experienced medical officers or the aid of well-qualified noncommissioned officers The limited number of these two classes in the medical department, and the necessity of assigning many of them to important administrative duties, renders it probable that few will be available for regimental duty, and only a small number with ambulance companies and field hospitals

For this reason, also, on the reserve and militia medical officers, graduated from these training camps, will fall the duty of themselves drilling and training the very many thousands of enlisted raw recruits which will be assigned to the medical department, and they must be put into a condition to carry out this most important work effectively

It is expected that each camp shall have accommodations for 600 medical officers They will be organized into companies, duly officered, commissioned and noncommissioned, to be selected from among the student officers and trained on a basis of medical cadets It is desired to impress on these new officers, by actual experience, what will later be required by them of their subordinates

The staff of the commandant, a medical officer, will be composed of an assistant commandant, an adjutant and a quartermaster, all of whom will be instructors in addition to their other duties It is proposed, if possible to assign additional instructors on the basis of one to each fifty student officers Due to the shortage of regular officers, specially qualified militia medical officers may be assigned to such duty Officers with regimental detachments, ambulance companies and field hospitals will, in addition to their duties as such, serve as instructors, due effort being made to assign to each subject, officers known to have given special attention thereto and to possess ability to impart information and student officers found specially qualified in any subject may be assigned as instructors and given special authority while so serving, irrespective of rank

The assistance of the line officer instructors at line camps in teaching map reading, special lectures and the tactical part of medicomilitary problems and maneuvers may be requested

Instruction by lectures, except in special subjects, will, as far as possible, give place to recitations Lectures are not considered as effective as recitations in imparting detailed information, nor do they afford opportunity to test the capacity of and grade the student

Lessons will, therefore, be assigned in the authorized textbooks, and quizzes held thereon, for the purpose of grounding students in theory and insuring that a competent knowledge of methods and principles has been acquired But coincident with this theoretical instruction, the student officers should, as far as possible, be made to visualize the organizations, apparatus and methods concerned In addition to study and lectures, it is most important that they should learn by seeing and doing So far as possible, instruction will be made practical To this end, for example, all sanitary appliances and methods likely to be of use in field work will be procured or constructed and continually kept in effective operation at the camp, and the officers will be shown their purpose and practical use Bomb proofs for trench warfare will be thrown up and gas chambers for practical trial of protection against poison gases will be constructed

In connection with paper work all papers required by the medical and other departments will be actually made out until familiarity therewith, and correctness of result, is secured

Mess management taught in theory, will be actually demonstrated in the organization kitchens Applied camp sanitation will be taught by sanitary inspectors Drill will be taught until every officer can effectively handle and instruct therein the units and detachments of the medical department

The interior economy and administration of regimental detachments, ambulance companies and field hospitals will be taught not only by books but by assignment to such organizations and quartering and subsistence therewith, and by actually handling them in marches and comprehensive field problems To permit of the latter it is expected that four ambulance companies, four field hospitals, and six regimental sanitary detachments, all complete and kept recruited up to war strength will be organized without delay The regimental detachments will be organized as two provisional companies, to be split into their integral regimental parts for demonstration purposes

Student officers will be assigned to duty with regimental detachments, ambulance companies and field hospitals as junior officers and supernumeraries, to familiarize them with these organizations, the handling of men, etc Officers so assigned should be quartered and messed with these organizations, but will pursue the regular curriculum of training at the camp Assignments should be made in rotation, and ordinarily for ten days with each organization

The training course will be divided into three periods, of one month each The first, while instructing the officer as such is intended especially to familiarize him with the duties of his enlisted subordinates whom he must shortly train The second takes up his training in his own special functions as an officer The third carries on and completes the work of the second period

New training classes should as far as possible be started at the conclusion of each month's training period However, to meet immediate needs, officers needing training will be sent to camps at any time and will be organized at once into groups for instruction

The following textbooks are authorized for the course Army Regulations, Manual of the Medical Department, Field Service Regulations, Drill Regulations for Sanitary Troops, Manual of Courts Martial Such other school textbooks as may be authorized will be announced later

The instruction, except Saturday afternoon and Sunday, should approximate seven and a half hours The following general scheme is suggested for the daily schedule for the first month

6		A M	Reveille
6 15	6 30	A M	Setting up
6 35	7 25	A M	Breakfast Police of quarters.
7 30	8 25	A M	Drill (marching?)
8 30	9 25	A M	Drill (special?)
9 30	10 25	A M	Quiz or lecture
10 30	11 25	A M	Quiz or lecture
11 30-	12 55	P M	Dinner, rest, etc.
1 00	1 55	P M	Quiz or lecture
2 00-	2 55	P M	Quiz or lecture
3 00-	4 25	P M	Equitation
4 30	5 55	P M	Care of animals, supper, rest, etc
6		P M	Retreat

On this general plan, 180 hours of formal instruction will be given monthly No evening exercises are contemplated Time will be needed for study Saturday afternoon to be a rest period. Officers to be encouraged in equitation on Sunday preferably in form of tactical ride The schedule for the third month will vary materially from above, due to the practical field sanitary problems contemplated and the fact that at least one full half day is ordinarily needed for each This provides for a total course of 580 hours of instruction

The following will indicate the proposed scope and distribution of training of medical officers during the first period of one month of thirty days

	Hours
Setting up (15 minutes daily for 26 days)	6 5
Drills (marching litter ambulance, other means of transport)	52
Inspections	4
Equitation bridling saddling care of animals etc	33
Tent pitching, shelter tent	2
Tent pitching pyramidal tent	[illegible]
Personal equipment of the sanitary soldier	1
Field and surplus kits	1
Care and maintenance of soldier s equipment	2
First aid using soldier's equipment only	2
Examination of recruits, with papers and finger prints	8
Nature and employment of regimental medical supplies	9
Customs of the service	2
Duties of the soldier	1
Regulation of Medical Department to rest of Army	1
General Organization of Medical Department for war	1
Army Regulations	12
General organization of military forces	2
Manual for the Medical Department	12
Military hygiene and sanitation	6
Field Service Regulations	6
Paper work relating to the Medical Department	4
Map reading use of compass orientation etc	6
	180

The following scheme shows the scope and distribution of training of medical officers during the second period of one month of thirty days

	Hours
Setting up (15 minutes daily for 26 days)	6 5
Drills marching	26
Inspections	4
Equitation and care of animals	33
Tent pitching hospital tentage	4
Elementary road sketching	4
The regimental detachment its use and internal administration	8
The ambulance company its equipment use and internal administration	8
The field hospital its equipment use and internal administration	8
The tactical use of infantry (lecture by line officer)	1
The tactical use of cavalry (lecture by line officer)	1
The tactical use of field artillery (lecture by line officer)	1
The use of the Engineer and Signal Corps (lecture by line officer)	1
The service and mechanism of supply in the field (lecture by Quartermaster)	1
Paper work relating to the Medical Department	12
Paper work relating to the Quartermaster s Department	4
Paper work relating to the Ordnance Department	2
The Medical Department in campaign	8
The principles of sanitary tactics	8
Map problems	4
War games	8
Military hygiene and sanitation	12
Army Regulations	6
Manual for the Medical Department	6
Lectures on special subjects	6
Total	180

The following scheme shows the scope and distribution of training of medical officers during the third period of one month of thirty days

	Hours
Setting up (15 minutes daily for 26 days)	6 5
Drills (service as drill master in drills of diverse nature)	26
Inspections	4
Equitation	15
Handling of rations and mess management	2
Manual for Court Martial and military law	8
The Articles of War	1
The Geneva and Hague Conventions	1
The rules of land warfare	1
Military surgery	8
Poison gases protection against symptoms and treatment (demonstrations)	1
Liquid fire shell shock	1
War psychoses and neuroses	2
Malingering	1
Trench warfare "trench foot"	1
Demonstration of trench system including bomb proofs dug outs entanglements abattis etc.	1
Cantonment hospitals organization and management of	2
The sanitary service line of communications	1
Hospital ships ships for patients hospital trains, trains for patients	2
Base hospitals their organization and management	1
General hospitals their organization and management	1
Contagious disease hospitals casual camps convalescent camps camps for prisoners of war	1
Organization functions and limitations of the American Red Cross	1
The civil sanitary function of the Army Medical Department in occupied territory	1
War games	2
Tactical rides	6
Sanitary inspections practical demonstration of methods of	4
Practical march and bivouac (2 days)	15
Practical field maneuver including brigade and divisional problems with two night problems and utilizing regimental detachments ambulance companies field hospitals stations for slightly wounded etc in coordination Problems will include the attack, retreat planned defense and reencounter with all arms	60
Lectures on special subjects	4
Total	1 0

To stimulate student officers to their best work a certain number of places in the grade of captain and major Medical Department Officers Reserve Corps will be left unfilled Appointment will be made to these vacancies from among the student medical officers who on vote of the staff of instructors are recommended by the commandant as possessing such exceptional knowledge aptitude and efficiency as would qualify them for such increased rank

To this end there will be established and maintained a grading system of marking by which relative efficiency will be recorded

Also medical officers satisfying the age and other requirements and after passing such examination as the surgeon general may require may subject to the vote of the staff of instructors and approval of the commandant be commissioned at once as first lieutenants in the medical corps of the army If any reserve officer is found unfit for the service by reason of physical mental moral or temperamental reasons, he will, on vote of the staff of instructors be recommended for separation from the service

Age Limit for Medical Officers Training Camps

Three weeks ago we concluded an editorial comment with the statement The men assigned to these camps for training will probably be the younger men—those under 45" This has called forth a number of letters from men over 45 who evidently feel that they have been placed in the discard and will not have an opportunity to do active service While the statement was correct viz that men over 45 are not ordered to the training camps at the same time a request from commissioned medical reserve officers who are over this age and who are in good physical condition will be given consideration Hence we would suggest that those officers who desire to obtain the training given in the camps of instruction for medical officers apply to the surgeon-general's office for such assignment In doing this it would be well to state the age date of physical examination and of commission, and rank.

Status of Physicians in the Draft

To the Editor —Kindly advise as to status of medical men below 31 conscripted under the selective draft law Will their rank be equivalent to that of a member of the Army Medical Corps Reserve Medical Corps or non commissioned officer?

L. Greenberg M D Brooklyn N Y

Answer —The above letter is one of many that have been received covering the same question The regulations for the draft and the exemptions have not yet been announced Undoubtedly however the qualifications of the medical man if conscripted will be recognized in any assignment he may be given

Staple Supplies for War Conditions

In addition to the list of staple surgical supplies announced last week, several other catalogues are in preparation as follows 1 Medicine Disinfectants Anesthetics, Chemicals, etc , 2 Hospital Equipment and Supplies, 3 Laboratory Apparatus, 4 Roentgen-Ray Apparatus, 5 Dental Instruments and Supplies These catalogues will be distributed through the Council of National Defense and will be sent free on request to any physician Address Dr F F Simpson, Chief of the Medical Section, Council of National Defense, Washington, D C

Physicians Recommended for Commission in Reserve Corps

During the week ending June 9, 1917, twelve majors, fifty captains and 441 lieutenants were recommended to the adjutant-general of the army for commission in the Medical Reserve Corps of the Army

Red Cross Commission to France

The Red Cross Commission to France which has gone abroad "for the period of the war" to study the needs and conditions of noncombatant populations in some of the European countries and to prepare the way for American troops, is headed by Major Greyson M P Murphy who has been given the military title and who goes with plenary powers Major Murphy, who will be known as commissioner for Europe, is vice president of the Guarantee Trust Company, New York, and a graduate of West Point There are eight deputy commissioners, including James M Perkins vice president of the National City Bank, New York, William Endicott of the firm of Kidder, Peabody and Company, New York, Carey Taylor, lawyer, New York, George B Ford, town planning expert, New York, Ernest McCullough, engineer, Boston, A W Copp, Ernest P Bicknell, who has resigned as director-general of civil relief of the Red Cross, and Dr Alexander Lambert, New York, who is the medical member of the commission The commission is accompanied by six inspectors for service in Europe, three secretaries and a comptroller The work of this commission will be to undertake matters of civil relief and to take charge of the human and sociologic aspects of the care of the wounded Henry P Davison, chairman of the new Red Cross War Council, has described this work as 'the most stupendous and appealing call in the history of the world to aid suffering humanity" The work of the committee is to be so extensive that its passports read only "to the Allies of the United States and to neutral countries"

Reserve Officers Ordered to Active Duty

The following officers of the Medical Reserve Corps at the places mentioned

To Fort Oglethorpe Georgia Captains Harry F Watt, Ocala, Fla , James W Squiers, Fort Wayne, Ind , Clement A Penrose, Edgar B Friedenwald and Arthur M Shipley, Baltimore, Md , Robert M Donald, Hattiesburg, Miss , Everett A Lockett, Winston Salem, N C , Brayton E Failing, Atlantic Highlands, N J , David H Crawford, Newark, N J , William J Condon, New Brunswick, N J , Blase Cole, Newton, N J , Frank Hancock, Norfolk, Va Lieutenants Frank G Grace, Walter F Scott, Birmingham, Ala , John R Armistead, Jackson, Ala , J Roscoe Elliott, Laurel, Del , George J Schirch, Washington, D C , James W Davidson, Clearwater, Fla Roscoe C Hubbard, Ellenton, Fla , William G M'Kay, Jacksonville, Fla , Orison O Feaster, Micanopy, Fla , Frank P Hixon, Joseph A Mixon, Pensacola, Fla , Robert F Godard, Quincy, Fla , John H Swafford, Athens, Ga , Evans B Wood, Atlanta, Ga , Carl A L Binger, George H Dorsey, Joseph S Lawrence, Oscar V Linhardt, Walter B Martin, William Neill and Edgar P Sandrock, Baltimore, Md , Joseph M White, Barnesville, Md , Maynard I Simmons, Indian Head, Md , David A Haller, Boston, Mass Harvey T Cuming, Gloster, Miss , Leonard Hart, Meridian, Miss., Philip F Brundage, Grantwood, N J , Widmer E Doremus, Arlington, N J , William T Elmore, Belleville, N J , Daniel L Golann and Frank N Mandeville, Newark, N J , Edward Guyon, Atlantic City, N J , William A Newbold, Belmar, N J , Morris L Potts, Trenton, N J John F Reeves, Elmer, N J , Frederic H Thorne, Greystone Park, N J, George W Vannatta, Orange, N J Eric A Abernathy and Louis H Webb, Chapel Hill, N C , J Rush Shull, Cliffside, N C , William J Chewning, The Plains, Va , Gerald A Ezekiel, Richmond, Va

To Rockefeller Institute, New York, for special course, Majors John W Hanner, San Francisco, Cal , and William H Moncrief, Tacoma Park, Md

To Fort Snelling, Lieut Henry Power, Rochester, Minn

To Washington, to Army Medical School for instruction, Captains Daniel W M'Millan, Pensacola, Fla , and Lester B Rogers, New York City Lieutenants Augustus C Gray, Washington, D C , Gustave R Gerson, New Orleans, La , William H Jenkins and William H Toulson, Baltimore, Md John S Abbott, St Paul, Minn , Roy L Scott, Sayre, Pa With merican Red Cross, Major Alexander Lambert, New York City

To Allentown, Pa, and eport to Major Elbert E Persons, with U S Ambulance Corps now being organized, Lieut Richard Slee, Swiftwater, Pa

To Philadelphia, to examine applicants for appointment in the O R C, Major Elijah H Siter, Philadelphia, from Fort Thomas and report to Major Elbert E Person Lieut Rufus A Van Voast, Cincinnati, O

To Letterman General Hospita San Francisco, Supt Emil O Jellinek, San Francisco

To Ithaca, N Y, to examine applicants for aviation section, Lieut Samuel A Munford, Ithaca

To Denver, Colorado, to examine recruits for base hospital No 29, Capt Cuthbert Powell, Denver

To Governor's Island, for duty in transport service Lieutenants Wesley M Thomas, Chicago, Ill , Leon E Lesser and Moses Sandler, Brooklyn, N Y , John E Conboy and Edwin W Goodman, New York City, John J Flynn, Yonker, N Y , Frederick A Lobb, Hawley, Pa., Harry T Stockton, Marcus Hook, Pa , Ralph S Bromer, Harold S Broomall, John B Carson and Francis V Gowen, Philadelphia, Pa , James L Hamner, Ammon, Va , Beverly F Eckles, Richmond, Va

To Fort D A Russell, Capt Robert L Tebbitt, Los Angeles, Cal

To Fort MacKenzie, Lieut Thomas V Moore, Washington, D C

To Kemmerer, Wyo, Lieut Hugh M Ware, Butte, Mont

To St Louis, Mo, Lieut Theodore P Brookes, St Louis

To Fort Benjamin Harrison, Ind , for a course of instruction in the medical officers' training camp Majors William L Cousins, Atlanta, Ga Harold D Cochrane, Albany, N Y Fred H Albee, Colonia, N Y , Richard Derby, Henry H M Lyle, Henry S Satterlee and John Warren, New York City, Melvin M Franklin and William Gillespie, Philadelphia, Pa Captains John S Dye, Waterbury, Conn , John A Martin, Indianapolis, Ind , Sidney M Bunker, Charles B Hollings and William J Mixter, Boston, Mass , Charles Whelan, Hingham, Mass , William Mitchell, Marion, Mass , Frank W George, Worcester, Mass , Hugh McD Beebe, Ann Arbor, Mich , Ernest N Dolman, Clark D Brooks, Theodore A McGraw, Jr , Frederick H Newberry, William J Stapleton, Jr , and Frank Luggs, Detroit, Mich , Alex J MacKenzie, Port Huron, Mich , Rollin C Winslow, Sault Ste Marie, Mich , Amos G Straw, Manchester, N H , Lester W Lord, West Assipee, N H , Edgar A Vander Veer and Howard L Van Winkle, Albany, N Y George P Coopernail, Bedford, N Y , Thurston H Dexter, Brooklyn, N Y , Ward J MacNeal, Forest Hills, N Y , George Baehr, Edwin Beer, Wyndham B Blanton, Archibald H Busby, Herbert L Cellar, Sidney Cohn, Robert T Frank, John C A Gerster, Leopold Jaches, Samuel J Kopetzky, Junius H McHenry, Leo B Meyer, Bernard S Oppenheimer, Marshall C Pease, Jr , and Richard Weil, New York City Max A Almy and George H Gage, Rochester, N Y , Harlow G Farmer, Watertown, N Y , Robert Conrad, Blanchester, O , David Marine, Cleveland, O , John R McDowell, Columbus, O , Arthur Smith, Elyria O , Sidney M McCurdy, Youngstown, O , James P Austin, Philadelphia, Ward Brinton, Philadelphia Walter S Cornell, George C Kieffer, and Chas M Montgomery, Philadelphia, Frederic Proescher, Pittsburgh, Pa. Lieutenants Mathew H Griswold, Kensington, Conn , Charles A Barron, Ga , William P Nicolson, Atlanta, Ga , James A Lindsay, Cairo, Ga , Homer E Line, William S Ehrich, Evansville, Ind Edward J Du Bois, Paul B Coble and Frederick C Warfel, Indianapolis, E Adrian Fauve, Ft Wayne, Ind , Ephraim B Chenoweth, Nineveh, Ind , Clayton C Campbell, Walton, Ind , Robert L Hoffman, Wichita, Kan , Enoch Bush, Winchester, Ky , Raymond Van Ness Bliss, Blue Hill, Me , Charles E Cook, Jr , South Berwick, Me Edson S Cummings, Lewistown, Me Edgar T Flint, Foxcroft, Me James F Bowen, Amherst, Mass , William R Ohler, John A Reese, James C Janney, and George Leland, Jr , Boston, Mass , Louis E Mannix, Chicopee Falls, Mass., Charles H Watt, Fall River, Mass , Howard A Lampher, Chester, Mass John M Maloney, Richard A Rochford, Parker M Cort, and William A R Chapin, Springfield, Mass Artemas W Chase, Adrian, Mich , Roland W Kraft, Ann Arbor, Mich , Elijah Van Camp, Athens, Mich , Bernard J Beuker, Atwood, Mich DeWitt C Adams, Highland Park, Mich , Roscoe G Leland, Kalamazoo, Mich , Harold E Clark, Detroit, Mich , Charles V Crane, Towas City, Mich , Samuel Miller, Manchester, N H , Ernest L Huse, Meriden, N H Jasper W Coghlan, Newark, N J , Frederick C Smith, Fort Stanton, N M , Frank S Child, Port Jefferson, N Y Herbert C Chase, Leon E Deyoe, Allison H Dugdale, Alfred Braun, George K Rhodes, Abraham Zingher, Charles H S Selinger, Clarence P Thomas, James W Worcester, Bernard H Eliasberg, Gilbert S Osincup, William D Anderson, Samuel H Geist, Richmond R Holt, Richard Bolling, and James M Kent, New York City Francis T Duffy, Troy, N Y Harmon H Ashley, Machias, N Y Albert Bowen, Rochester, N Y John P McQuillin, Stanley W Pallister, Brooklyn, N Y , Joseph E Rapuzzi, Staten Island, N Y , Ira A Rowlson, Plattsburg N Y , George S Silliman, Westbury, N Y , William E Youland and Otto R Eichel, Albany, N Y , Melville D Ailes, Warren, O Victor Biddle, Charles W Mason, Steubenville, O , Herbert A Brown, Cincinnati, O , Theodore Burstein, Cleveland, O , Nathan W Meyer, and Albin M Painter, Youngstown, O , Ralph T Shipley, Carrolton, O , Anton B Spurney, Cleveland, O , William T Feuker, State Soldiers Home, O , George A Ferguson, Toronto, O , Carl I Hartmann, Wauseon, O , Albert W Cole, Robert T Devereux, Thomas M Armstrong, John A Bertolet, Baldwin H E W Lucke, William J Lynch, Edward W McCloskey, John E Medley, Thomas G Miller, Charles A O'Reilly, Frank McC Ramsey, William C Ryan, Phillip A Sheaff, Cheney M Stimson, William D Stroud Isaac S Tassman, Harry B Wilmer, Karl D Winter, Jay D Zulick, John D Elliott Edgar W Fought, Daniel M Hoyt, Henry E Keely, Frank C Knowles, Jackson S Laurence, William W Lerman, Wilfred B Fetterman, and Samuel Leopold, Philadelphia, Pa , George W H Conrad, Johnstown, Pa , Charles C Crouse, Derry, Pa , Richard H Eanes Widen, Pa , James H Austin, Ardmore, Pa , Ralph E Buckley, Hazleton Pa , Stoddard S Burg, Northumberland, Pa , Benjamin J Longwell, Seminole, Pa George W Miller, Norristown, Pa Henry Pleasants, Jr , West Chester, Pa , Maurice S Redmond, Austin C Frank Samuel Hamilton, Jr , Elmer C Jackson, Carey J Vaux, and Daniel F Jackson, Pittsburgh Pa , Simon W Reichard, Wilkes Barre, Pa George H Robinson, Uniontown, Pa , Grover C Schwartz Perkasie Pa , Edward J Gordon, Wyncote, Pa Ralph L. Hill, Woodville Pa Robert C Johnston, Springdale, Pa , Harold De Wolf, Bristol, R I Fred S Wright, Brownsville, Tex , William C Moser, Morganto n, W Va Maurice C. James Hinton W Va Esley T Lake Nuss W Va John S Sharp, Salt Lake City, Utah Benjamin F Petry

To Allentown, Pa, report to Major Elbert F Persons, Lieutenants Charles K. Berle Louisville, Ky, Samuel M Browne Orangeburg, S C., Rossner E. Graham New Orleans, Thomas D Hurley New Orleans, Alexander E. Listoe Washington David L Smith St Louis Max K. Stockton, Philadelphia George S Woodward, Philadelphia.

To Fort Riley, Kansas Majors George G Davis and Ralph W Webster Chicago Captains Basil C. H Harvey, Homer K Nicoll, Jesse E. Royer, Warren P Sights and Walter I Von Zelinski Chicago Ellis K Kerr, Oak Park, Ill John C Staley, St Paul, Francis St C Reilly Inverness Mont., Harry Greenberg Milwaukee. Lieutenants Frederick J Smith San Diego Calif Caro W Lippman William A. Sampson and Harold W Wright San Francisco Herbert R Stolz Stanford University Calif Ray H Davies Lee C Gatewood, David H Keller Lawrence H Roblee and Andrew J Lyons Chicago, Royal Tharp East St. Louis Ill Gilbert J Thomas, Minneapolis Frank P Kimball Frisch Prairie Minn Philip E. Stangl, St. Cloud, Minn Spies V Walking, Butte, Mont William T Lewis New York Arthur T Blachly Portland Ore Frank Van Doren Seaside Ore Harry T D Arc Mt Vernon Wash Fred J Whittaker Republic Wash Edmund H Smith Seattle Frederick C Sprowl and Herbert F Wheeler Spokane Wash. William T Clark Ft Atkinson, Wis Earl L. Parmenter Mondovi, Wis Clarence A. Richards, Rhinelander Wis. Albert M Farrell Two Rivers Wis.

To Plattsburg Barracks N Y, Lieut Charles W Woodall, Schenectady N Y report for duty to commanding officer of that post

To Fort Ethan Allen, Vt Lieut John C Murphy Hinesburg Vt to report for duty to commanding officer of that post.

To Fort Stevens, Ore. Capt Arthur A Finch Astoria Ore. to report for duty to commanding officer of that post

To Cincinnati, Ohio Lieut William J Topmoeller Cincinnati, Ohio, to report to Col. Lansing H Beach Corps of Engineers Customhouse for duty pertaining to the examination of reserve corps recruits.

To San Francisco Calif Lieut Pierre N Charbonnet Ft McDowell Calif is relieved from duty at Fort McDowell Calif and will report to commanding officer, Eighth Reserve Engineers Regiment San Francisco, for duty

Lieut. John C Graham Brooklyn N Y is relieved from duty at Fort Hamilton N Y and will proceed to his home reporting on arrival to the Adjutant General of the Army by telegraph Lieut. John C. Graham is honorably discharged from the service of the United States to take effect upon the expiration of the leave of absence granted him his services being no longer required.

Charges Against the Naval Hospital Ship Solace Unfounded

'In our judgment, Surgeon-General Braisted of the Navy, Dr Blackwood, medical inspector in command of the *Solace*, and his staff, as well as Dr Pickerel medical inspector in charge of the Naval Hospital and his assistants, are all entitled to the highest praise for their devoted and untiring efforts and for the success which they achieved under extremely difficult conditions Thus Dr W H Welch, Dr Abram Flexner, and Mr Nathan Straus, the special committee appointed by Secretary of the Navy Daniels to investigate charges of conditions and management aboard the hospital ship *Solace*, are reported in The Journal, June 9, page 1706, sum up the results of their inquiry Not only does the committee exonerate from all blame the officers and men named above, but it goes further and says that some of the charges were in fact untrue and others grossly exaggerated, that while the ship was overcrowded at the time the charges were made, yet there was no lack of care or medical attendance, that the patients suffering from different infectious diseases were carefully segregated, that the regulations in regard to sanitation were observed and that the entire ship including blankets, dishes, etc was sterilized after every trip to the hospital

The charges that led to the appointment of the committee were embodied in a 'round robin" signed by 30 enlisted men in the navy and were first brought to the attention of the public by Senator Calder, who presented them to the United States Senate in open session. The committee charged with the investigation of the matter visited the fleet, a large naval hospital a naval training station, and a navy yard, where every facility for investigation was placed at their command An entire day was spent on the *Solace* and members of the staff and patients were questioned. In all more than 100 patients were interviewed, who were aboard the *Solace* when the 'round robin' was drafted, or had been there either shortly before or shortly after that time, such interviews taking place in the absence of officers and attendants and under assurances from the committee that names of the patients interviewed would not be used.

Discussing conditions aboard the *Solace*, the committee calls attention to the fact that this is the only hospital ship in the navy It has a normal capacity of 228 beds Thirty of these, on the upper deck, arranged in three separate wards which have no direct communication with one another—one having eight beds, another having ten and the third having twelve—are set apart for patients suffering from communicable diseases Each ward has a lavatory, with a basin and running water Two have separate compartments for washing dishes and other vessels The third, the measles ward has no such compartment, and dishes used in it are washed in large pans outside All three wards are well ventilated and serve their purposes excellently under normal conditions The main hospital accommodations of the *Solace*—the medical and surgical wards and the operating rooms—are on the deck below, and are reported by the committee as being models of their kind

The staff consists of a medical inspector, who is in command an executive surgeon, an operating surgeon an internist, a specialist in genito urinary diseases, a specialist in diseases of the eye ear, nose and throat a laboratory chief a dentist a pharmacist and assistants, and naval hospital apprentices as they are officially designated who are in effect male nurses specially trained for the naval service

The accommodations of the *Solace*, however adequate for ordinary conditions, were, according to the report of the committee, clearly overtaxed as the result of the rapid assembling of naval recruits, following the official recognition of the existence of a state of war, but the committee recognizes the skill and intelligence of the naval officers on duty in utilizing to the very best advantage such resources as were at their command to meet the emergency Recruits from all over the country rapidly poured into training camps and from these camps they were sent to the fleet Something of the magnitude of this assembling of recruits can be understood when it is realized that at Norfolk sometimes 700 and more arrived in a day and that the fleet population of 25 000 was speedily gathered there The unusual prevalence throughout the country of measles, mumps, scarlet fever and cerebrospinal fever and the rapid assembling of these recruits necessary in the early days of mobilization, inevitably lead to a considerable number of cases of the common infectious diseases

The war vessels" according to the report of the committee, "had at once to transfer their infectious cases to the *Solace*, which, equipped to handle comfortably 30 infectious cases had to handle at times more than three times that number The pressure was most severe between the 18th and 21st of May, the dates covered by the round robin On May 18 there were seventy-two infectious cases on board Eight more were added on the 19th fourteen more on the 20th, and seven on the 21st—101 in all—over three times the normal capacity of the hospital ship It was impossible for the *Solace* to avoid congestion by more frequently transferring patients to the Naval Hospital In the first place, the Naval Hospital was itself overtaxed and the bungalows and tents which now enable the hospital to accommodate a largely increased number of patients had not then been sufficiently provided Again on account of its operating facilities and its facilities for taking care of noncontagious medical patients it was important that the *Solace* stay by the fleet, avoiding as long as possible the loss of time required for the trip to the hospital and back."

In order to meet the increased demands, the staff of the *Solace* was increased, tents were erected on deck, and cots and army stretchers were provided Arrangements were made for an ambulance transport, to carry patients from the *Solace* to the Naval Hospital, and this was put into service a few days before the committee made its report. Strict precautions were taken at all times to prevent the spread of infections with marked success, cross-infections being extremely rare, both on the *Solace* and in the Naval Hospital

Discussing specific complaints, the committee reported that it was unable to find anyone except the author of the "round robin" who stated that patients were compelled to carry their own baggage, that the charge in reference to the scarcity and temperature of the drinking water was grossly exaggerated, and the implication of lack of care entirely undeserved, that the charge that "vessels were standing around with germs of scarlet fever and mumps" in the lavatory where the dishes used by men sick with measles were washed, was impossible and absolutely absurd, that the method adopted for feeding patients was the only one practicable and was entirely correct, that the committee was unable to find a single patient, except the author of the "round robin," who complained that he was unable to get enough food, and that even he, according to the statement of one of his neighbors was fed regularly and abundantly, that while a few patients stated that on the night of their arrival on the *Solace* litters and cots had given out, and they slept between blankets on the deck, yet under the circumstances no special harm could have resulted, and in the opinion of the committee the charge applied to so few persons as to be practically negligible, that the charge that blankets were passed indiscriminately among patients suffering from measles, mumps, and scarlet fever, without disinfection, was not supported by the facts of the case, including the extremely good records of the *Solace* and Naval Hospital with respect to cross-infections, and that the charge that sick men were unable to wash themselves at proper intervals was not supported by the testimony of the patients interviewed by the committee

---

Protecting the Practice of the Absent Physician

The Ninth District (Kansas) Medical Society adopted resolutions to the effect that the men who remain at home shall attend to the business of physicians who are called to active duty with the army, and on the return of these physicians turn back the patients together with one third of the income received during the physicians' absence They resolved, further, to discourage the attempt of any physician to locate permanently in a community temporarily vacated by the physician who has gone to the front——The auxiliary council of the Allegheny County (Pa) Medical Society has announced that physicians, members of the society, who enter military service will receive 35 per cent of the income of their practice while they are absent——At a meeting of the Kings County (N Y) Homeopathic Medical Society, in Brooklyn, resolutions were adopted that the society protect, by every possible measure, the private practice of medical men who enter military service——At the May 28 meeting of the Medical Society of the County of New York it was announced that a fund had been started by Dr Edwin B Cragin for the support and care of the wives and families of members of the society and other members of the profession of New York who may require financial aid as the result of the head of the family being called into the service of the country Dr Cragin started this subscription with $10,000, Dr John F Er[illegible]n gave $5,000 and Dr Seth M Milliken $1,000 to the fund The president of the society announced the formation of a joint committee of the New York City Academy of Medicine and the society to administer the fund and receive contributions The committee will be known as the Committee on the Amelioration of Hardships of the Families of Physicians Called into National Service Dr Walter B James is chairman, Dr Edward L Hunt, secretary, Dr J Bentley Squier, Jr, treasurer of the committee——The Audubon County (Iowa) Medical Society has adopted resolutions endorsing either the payment of $5 per month for each member of the society who is in the military service or the payment of one third of the fees collected for service to regular patients of the absent member while he is in the military service——The executive committee of the faculty of the medical department of the University of Louisville has adopted resolutions that any members of the teaching forces who may join the medical service of the United States will be reemployed by the university at the end of hostilities——The Indianapolis Medical Society has adopted resolutions recommending that one third of the fund collected for professional work by physicians in Marion County for services to the families of physicians in government service be turned over to the absent physicians on their return or be paid to their families——The Madison County (Ind) Medical Society has decided to take care of the practice of the four physicians of the county who are in the army medical service and return the practice to them when they leave the army——Physicians of Douglas County, Wis, who enter military service will be given one third of the receipts from patients who ordinarily would have employed the absent physician An agreement to this effect has been drawn up by the county medical society

---

To Raise Field Hospitals and Ambulance Companies—Major James F Hall, M C, U S Army, has selected the following physicians to enlist and presumably to command additional field hospitals and ambulance companies, assigned to field hospitals are Drs Charles R Morgan, Boston, Major Bial F Bradbury, Togus, Me, Howard W Beal, Worcester, Mass, Otto G Wiedman, Hartford, Conn, Edmund Russell, Waterbury, Conn, and Harold G Giddings, Boston, those assigned to ambulance companies are Drs Howard D F Lockwood, Meriden, Conn, and William E Hamlin, Waltham, Mass

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST, SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC)

ILLINOIS

The Alumni Elects Officers—The Alumni Association of the Northwestern University Medical School held its annual meeting in Chicago, June 11, under the presidency of Dr James H Stowell, and elected the following officers president, Dr Carl E Black, Jacksonville, vice president, Dr Victor D Lespinasse, Chicago, secretary, Dr Leo G Dwan, Chicago (reelected), and necrologist, Dr Samuel C Stanton, Chicago (reelected)

Chicago

Summer Session—The second session of the Graduate Summer Quarter in the College of Medicine of the University of Illinois will open June 20, to be continued until September 12

Senior Student Dies—Michael Henry Flynn, a senior student in Rush Medical College and an intern in St Joseph's Hospital, who fainted and fell fracturing his skull, while assisting in an operation at the hospital, May 24, died in the institution a week later

Personal—Dr Luther H Maloney, formerly of Savanna, has been appointed medical director of the Rockefeller Municipal Sanatorium——Dr Julius H Hess, Chicago, has been appointed professor and head of the division of Diseases of Children in the University of Illinois College of Medicine, and chief of the department of Diseases of Children in Cook County Hospital Associated with Dr Hess is Dr Jesse R Gerstley

MARYLAND

Personal—Dr Hugh Hampton Young, major in the Officers' Reserve Corps, who is head of the commission appointed officially to represent the medical service of the American army abroad, has arrived in London With Dr Young are Dr Louis C Lehr, Washington, D C, and Dr Howard L Cecil, Baltimore

Women Physicians Elect Officers—At the annual meeting of the Women's Medical Society of Maryland, held in Baltimore, May 23, Dr Caroline B Towles was elected president, Dr Anna D S Abercrombie, vice president, Dr Flora Pollack, corresponding secretary, Dr Mary C Willis, recording secretary, and Dr Mary F Voeglein, treasurer, all of Baltimore

St Joseph's Hospital to Offer Unit—Arrangements are under way at St Joseph's Hospital, to form a well equipped hospital unit for active service in the field As soon as the plan of organization is complete the staff will volunteer as a whole for immediate service Foremost in the plans of the organization are Drs William H Yeager, chief resident physician, James A O'Donnell, Frank Martin, Johnson and George W Bishop

Park Physicians Selected—A corps of surgeons is to be selected by the park board for the treatment of employees injured in the service The following were recommended by the district superintendents and are expected to be named by the board Drs Harry C Algire, Charles S Parker William G Coppage, Jacob Fisher and L Ridgely Wilson A surgeon is to be assigned to each of the five districts and paid only when called on to render professional service

MINNESOTA

Southern Minnesota Physicians to Meet—The midsummer meeting of the Southern Minnesota Medical Association will be held at Faribault, June 23 and 24 The preliminary program includes papers on unusual fractures and dislocations, the tuberculosis situation, and the diagnosis and treatment of epidemic cerebrospinal meningitis

Personal—Dr George B Weiser, New Ulm, has been appointed a member of the State Board of Medical Examiners——Dr Russell Noice Minneapolis, has been appointed first lieutenant of the Medical Corp, and assigned to duty with the First Minnesota Infantry, succeeding Dr Ralph J Sewall, Crosby, resigned——Dr Edward A Eberlin has been appointed local surgeon for the Minneapolis, St Paul and Sault Ste Marie Railway at Glenwood

Hospital Notes—The construction of the five proposed additional stories of the Minneapolis Hospital is approved by the ways and means committee of the city council The total cost of the addition will be about $80 000——The contract for the construction of the Sacred Heart Sisters Home, East Grand Forks, has been awarded for $25 000——The board of directors of the Bethseda Hospital Association, Crookston, has decided not to build the proposed addition to the institution at present, on account of the high cost of material

NEW YORK

Police Ambulance for France.—The honor legion of police department have set aside $1 100 for the purchase of an ambulance and a movement has been started by civilian backers of the legion to send several ambulances which will be driven by New York policemen——Eighty clubs and members of the Metropolitan Golf Association have contributed $85 000 in a Red Cross benefit tournament toward the purchase of fifty ambulances which they will maintain along the French frontier

New York City

Association of Cardiac Clinics Meets—The Association of Cardiac Clinics organized at a meeting of workers of special cardiac clinics of New York, Feb 14 1917 held its second meeting on April 30 At this time a report was made on the districting of the city as an aid to the work of the clinics Arrangements were made for sending patients to convalescent homes and a classification of patients with cardiac disease was outlined and accepted

Personal.—A loving cup was presented to Dr Thomas E. Satterthwaite at the annual banquet of the American Therapeutic Society June 2. The inscription states that the cup is given as a token of esteem and in recognition of his faithful and valuable services to the society and to the medical profession The presentation was made by Prof Oliver T Osborne of Yale University——Dr Anthony Bassler has been elected professor of gastro-enterology in the New York Policlinic School and Hospital——It is reported that the condition of Dr Hideyo Noguchi who is seriously ill with typhoid fever in Mount Sinai Hospital is improving——Dr Marcus B Heyman assistant superintendent of the Central Islip State Hospital since 1897 has been appointed medical inspector of the State Hospital Commission Dr Heyman's place has been filled by the appointment of Dr Horatio G Gibson, Jr

OHIO

Personal.—At the meeting of the Alliance Medical Society, May 31 Drs Homer G Scranton and Benjamin C Barnard who have accepted commissions in the Medical Corps U S Army were presented with gold wrist watches at the meeting of the Alliance Physicians' Society——Dr Charles M Mooney, Waverly is reported to be seriously ill with septicemia in the Cincinnati General Hospital——Dr William W Pennell Mount Vernon who has been seriously ill in a hospital in Cincinnati is convalescing and has gone to the home of his daughter in Washington Court House

Survey of Hospitals and of Medical Licensure—Governor Cox of Ohio has created a commission to make a survey of, and a subsequent report with recommendations regarding (*a*) the present system and laws relating to the incorporation licensing inspection supervision and regulation of public and private hospitals and (*b*) the present system and laws relating to medical licensure and medical education and the education and licensure of those who treat the sick public by systems of healing other than medical On this commission the governor appointed Mr Howell Wright, secretary of the Cleveland Hospital Council and Mr George V Sheridan, executive of the Ohio State Medical Association Columbus

Cleveland

"Fraudulent Proprietary Medicines—The sale of Kilmer's 'Swamp Root,' Varlex and Sargol has been ordered discontinued in Cleveland since the inauguration of the City Bureau of Laboratories' Crusade against fraudulent proprietary medicines and other misbranded preparations Swamp Root is largely a dilute alcohol-water solution of sugars and absolutely injurious in the case of kidney disease, which it professes to cure according to the bureau s analysis 'Sargol claimed to be a flesh builder Letters notifying the company of the city s action were returned marked fraudulent by the Postoffice Department Varlex' was advertised as a cure for the tobacco, drug and liquor habit The bureau is busily engaged in gathering data and an embargo will shortly be placed on a number of other products"

PENNSYLVANIA

Personal—Dr Robert C King Hellertown, suffered a fracture of the knee cap when he lost control of his automobile near Shimerville——Dr Daniel P Gerberich, Lebanon, who has been seriously ill is reported to be convalescent——Dr George B Klump Williamsport has been appointed local surgeon for the Pennsylvania System to succeed Dr Eugene B Campbell deceased——Dr Roderick E. Albright, Allentown who was operated on for appendicitis, recently, is reported to be convalescent

Antidope Bill Passes—The antidope bill unanimously passed the house of representatives, June 7 This bill is designed to correct not only the social evils of Pennsylvania but to enforce the federal laws governing traffic in narcotic drugs A fine feature of the bill is the one dealing with the treatment of the addicts by practicing physicians who must register the names of such patients with the board of health Agents of the board who cover every section of the state must make their complaints to the different district attorneys

Committee for Recruiting Reserve Officers—Physicians of Pennsylvania who have not already responded to the call for war duty by enlisting in the Medical Reserve Corps are being urged to rally in the cause A committee has been formed within a few days and will conduct a campaign for the purpose of arousing patriotism The committee who will urge the enrolment of more than 13 000 physicians within the commonwealth was designated today by Dr Edward Martin professor of surgery in University of Pennsylvania He is chairman of the state committee of the Council of National Defense

National Guard Changes—The following commissions to medical officers have been issued majors Norman D Smith, Rutledge Leonard D Frescoln Philadelphia, Charles P Brady Philadelphia and Scott M Huff, Center County, lieutenants Royal H McCutcheon Bradford Massey, Charles S McGivern James R Martin, Washington Merscher Philadelphia, Vite L Van Kirk Jr, Pittsburgh——Lieut Frank B Baird M C has resigned——Capt Eugene Swayne Philadelphia has been relieved of duty with Field Hospital No 2 and Lieut Charles S Pancoast from Ambulance Company No 1 and both have been assigned to Field Hospital No 3——Lieut D E Sible has been released from duty with Ambulance Company No 1 and assigned to the First Field Hospital——Major Gregg A Dillinger M C. has been relieved of assignments with the First Field Artillery, and directed to await further orders

Philadelphia

Charitable Bequest—The will of the late Dr Louis P Posey bequeaths his medical library to the Hahnemann Medical College and Hospital of which he was manager

Medical Club Reception—The Medical Club of Philadelphia gave a reception in honor of Col John Gribbel president of the Union League Club and the Hon George B Orlady M D LL.D presiding judge of the superior court, on June 8, at the Bellevue-Stratford Hotel

Jefferson Commencement—The ninety-second annual commencement of the Jefferson Medical College was held in the Academy of Music on June 2. Edwin Erle Sparks Ph D LL D president of the Pennsylvania State College, delivered the valedictory address and 140 men were graduated

Ambulance for Hospital Unit—Base Hospital No 34 being organized by the physicians of the Episcopal Hospital, has been presented with a motor ambulance by the parishioners of St. Stephen s Church The car will hold four patients, as well as driver and attendant This unit consists of twenty-five surgeons sixty-five nurses and 125 orderlies and attendants

Personal.—Dr Francis E Stewart, professor of clinical surgery Jefferson Medical College, delivered the annual address to the graduating class of the Jefferson Hospital Training School for Nurses on May 24, in the hospital amphitheater——Dr Luther C Peter has been appointed professor of ophthalmology in Temple University——Dr William T Ellis Swarthmore, and Charles Beury, Tioga, sailed from Vancouver June 7 on the *Empress of India* for Russia and the Caucasus to make a study of the refugees and of the relief work that is being done in that portion of Asia——The Medical Club of Philadelphia gave a reception, June 8, at the Bellevue-Stratford Hotel in honor of Col John Gribbel, president of the Union League, and Hon George B Orlady, M D, presiding judge of the superior court——The resignation of Dr Clara Marshall, dean of the Women's Medical College of Pennsylvania, was announced, June 6, and Dr Martha Tracy, professor of chemistry at the college, has been appointed acting dean——Dr John B Deaver was elected vice president, and Dr John H Gibbon, secretary, of the American Surgical Society at its closing session in Boston, June 2

VIRGINIA

Senior Student Dies—Lewis Banks Payne, son of Dr Robert L Payne, Norfolk, a senior student in Jefferson Medical College, Philadelphia, died in that city, May 7, from pneumonia

New Society Organized—The Albemarle Medical Society was recently reorganized at Charlottesville with the following officers president, Dr Edward M Magruder, vice president, Dr William D Macon, and secretary-treasurer, Dr Frank C. McCue

Faculty Named for Social Economy School—The following physicians are announced as members of the faculty of the Richmond School of Social Economy Drs Ennion G Williams, Roy K Flannagan, James H Smith, William H Higgins, McGuire Newton and Aubrey Straus

New Officers for Health Association—At the annual meeting of the Virginia Public Health Association, held in Lynchburg, Dr W Brownley Foster, Roanoke, was elected president, Dr Claude B Bowyer, Stonega, vice president, Dr Roy K Flannagan, Richmond, secretary-treasurer

Medical School Changes—At the meeting of the board of officers of the University of Virginia at Charlottesville, Dr Theodore Hough, acting dean, was made dean of the medical school, Dr James A Wardell, associate professor, was made professor of pharmacology and materia medica, and Dr John H Neff, instructor, was made adjunct professor of genitourinary surgery

Personal—Dr John H Ayers, Accomac, has been appointed a member of the State Board of Medical Examiners, succeeding Dr Joseph N Barney, Jr, Fredericksburg, who resigned, to accept military service——Drs William F Parker and James P Roy have been reelected grand medical examiners of the Order of Heralds of Liberty——Dr William A. Brumfield, Lynchburg, has been confirmed as assistant state health commissioner, succeeding Dr Roy K Flannagan, resigned, to become chief health officer of Richmond, in place of Dr Ernest C Levy——Dr James M Whitfield, city chemist of Richmond, has resigned, to become coroner of Henrico County to serve out the term of the late Dr William H Taylor

WISCONSIN

District Society Meeting—At the annual meeting of the Ninth District Medical Society, held in Stevens Point, May 30, Dr Ellietson H Rogers, Stevens Point, was elected president, and Dr Joseph F Smith, Wausau, was elected secretary

Field Hospital and Ambulance Companies—The War Department has ordered Wisconsin to furnish two field hospitals and two ambulances companies One field hospital is already organized in Milwaukee and one ambulance company in Racine A second field hospital is to be organized in Madison, and will be in charge of Lieut W F Lorenz

Personal—Dr Joseph B Noble, Waukesha, who has been
seriously ill with septicemia as the result of a glass wound
of the finger, is reported to be convalescent——Dr Oscar
Lotz, Milwaukee, has been appointed a member of the Wis-
consin State Board of Medical Examiners——Dr Charles M
Gould, for six years health commissioner of Superior, has
resigned on account of ill health

Compensation for Typhoid—The State Industrial Commis-
sion has announced awards in the seven Eau Claire typhoid
fever cases, totaling $5,356 83 These cases go back to 1914,
when thirteen workmen employed by the New Dells Lumber
Company and two men employed by the Pioneer Furniture
Company contracted typhoid fever, two dying In accordance
with the decision of the supreme court, the industrial com-
mission in these cases holds that typhoid fever contracted by
an employee as the result of drinking polluted water fur-
nished by an employer is a personal injury accidentally
sustained

WYOMING

New County Society—Physicians of Albany County met at the Invinson Memorial Hospital, Laramie, May 30, and organized the Albany County Medical Society, electing Dr Herman E McCollum, president, Dr J W Price, vice president, Dr Josiah P Markley, secretary, and Dr Henry L Stevens, treasurer

CANADA

Health Certificates Before Marriage—The National Council of Women, meeting at Winnipeg, Man, has passed a resolution calling on all provincial governments in Canada to make it a law that health certificates must be produced before a marriage license is granted in Canada, the idea being to protect the race from contamination with venereal disease

Health Officers' Election—The Ontario Health Officers' Association held its sixth annual meeting in Toronto, May 19 and 20, under the presidency of Dr Alexander J Macaulay, M O H, Brockville The principal address was that of Dr C E A Winslow, professor of public health in Yale University on "Safeguarding the Health of Young Children" The following officers were elected president, Hibbert W Hill, M O H, London, vice presidents, Georgia S Cruickshank M O H, Windsor, E A Wincon, M O H, Kingston, and secretary, Dr John W S McCullough, Toronto

Personal—Major Thomas D Archibald, Toronto, who was overseas for a year or more, and who some weeks ago returned to Toronto, has been appointed officer commanding at the Whitby Hospital for returned wounded soldiers——Lieut Clifford K Langford, M D, Saskatoon, Sask., has been appointed to the standing medical board in that district——Drs R J Roche and Cameron T Coulter, Gull Lake, Sask, have been appointed officers on the district medical mobilization board——Dr Theodore G H Drake, Toronto, after spending a year with the Royal Army Medical Corp in France, has returned to Canada, and has located at Carson, Sask——Capt C Gordon Gunn, M D, Edmonton, Alta, has been recommended for distinction on account of conspicuous bravery——Lieut-Col William B Hendry, Toronto, in command of the University of Toronto Base Hospital at Saloniki, was the recipient of D S O in His Majesty's birthday honors——Dr David S Johnstone, Regina, Sask, who recently went overseas as radiographer to the C A M C, is connected with Saskatoon Field Hospital No 8——Lieut-Col Cameron A A Warren, second in command, Toronto Military District, has resigned and has been appointed to the New York office of the British office for recruiting of British subjects——Capt E Ward Wright, Toronto, who has been in command of the Soldiers' Convalescent Home, Whitby, Ont, has resigned, and has accepted an appointment in the office of the British ministry in New York

GENERAL

Association Purchases Liberty Bonds—The Board of Trustees of the American Medical Association, at its meeting in New York last week, voted to invest the sum of $20,000 in Liberty Loan Bonds

Dr Seale Harris Ill—Dr Seale Harris, editor of the *Southern Medical Journal*, developed an acute attack of appendicitis while attending the New York Session of the Association He was operated on at the Roosevelt Hospital and is reported to be making an uneventful recovery

Association of American Teachers of the Diseases of Children—This organization held its eleventh annual meeting at the Plaza Hotel, New York, June 4, 1917, under the presidency of Dr Laurence R DeBuys, New Orleans The officers elected for the ensuing year are president, Dr John Lovett Morse, Boston, senator at large, Dr Harry M McClanahan, Omaha, secretary, Dr Edgar P Copeland, Washington, D C, and treasurer, Dr Harry Lowenburg, Philadelphia

Laryngological Society Elects—At the closing session of
the American Laryngological, Rhinological and Otological
Society, the following officers were elected president, Dr
George L Richards, Fall River, Mass, vice presidents, Drs
D Crosby Greene, Jr, Boston, Daniel W Layman, Indian-
apolis, Frank R Spencer, Boulder, Colo, secretary, Dr Wil-
liam H Haskin, New York, treasurer, Dr Ewing W Day,
Pittsburgh, council, Drs S McCuen Smith, Philadelphia,
Robert Levy, Denver, D J Gibbs Wishart, Toronto, Edward
B Dench, New York, Thomas H Halsted, Syracuse, Walter
A Wells, Washington, D C, Thomas J Harris, New York,
Francis P Emerson, Boston, and Lee W Dean, Iowa City,
Iowa

PROCEEDINGS OF THE NEW YORK SESSION

MINUTES OF THE SIXTY EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT NEW YORK CITY, JUNE 4-8, 1917

(Continued from page 1768)

HOUSE OF DELEGATES

Second Meeting—Tuesday Morning, June 5

The House of Delegates met at 9 40 a m, and was called to order by the chairman

Supplementary Report of the Committee on Credentials

Dr D Chester Brown, Connecticut, chairman presented a supplementary report of the Committee on Credentials, which was accepted, and those reported were seated as members of the House

The roll was called and the secretary reported a quorum present

The chairman of the House of Delegates then introduced Dr William Wesley Peter Shanghai China, secretary of the Joint Council on Public Health Education of the National Medical Association the China Medical Missionary Association and Young Men s Christian Association who extended the greetings of the China Medical Missionary Association and the National Medical Association to the American Medical Association

The secretary read the minutes of the previous meeting which on motion of Dr Randolph Winslow, Maryland, were adopted

Report of the Reference Committee on Reports of Officers

Dr Horace G Wetherill Colorado chairman, presented the report of the Reference Committee on Reports of Officers, as follows

Your Reference Committee on Reports of Officers offers the following recommendations

THE PRESIDENT S ADDRESS

Your committee would recommend to the House of Delegates that the action of President Blue in appointing a committee to outline recommendations for the best method of utilizing the facilties of the American Medical Association in preparing for war be endorsed and approved The emergency was such that we deem the President was well within the exercise of a proper discretion in assuming the responsibility of naming this committee The House of Delegates should also confirm the action of the committee consisting of Dr Arthur Dean Bevan, chairman, Dr Alexander Lambert, and Dr John W Kerr

REPORT OF THE SECRETARY

Your committee recommends to the House of Delegates that the discretionary action of the secretary, be approved in offering the Surgeon-General of the United States Army, and the Surgeon-General of the United States Navy the services and cooperation of the American Medical Association in any way in which the facilities of the office or of the organization might best serve the medical departments of the federal government We furthermore suggest to the House of Delegates that it formally and officially offer to the government through adoption of this recommendation the services and facilities of the American Medical Association for such assistance as it may be in its power to render hereafter

REPORT OF THE BOARD OF TRUSTEES

This complete and comprehensive report merits careful study by each member of the House of Delegates It is quite apparent that serious economies have already become necessary and it is probable that during the next year even greater economies must be considered. The high cost of paper and other publication supplies and the imminent decrease in the revenue of THE JOURNAL, create a situation calling for the most careful consideration of future events Your committee desires to endorse fully and most heartily the measures of economy already adopted by the Board of Trustees in the publication of THE JOURNAL, and particularly we recommend the approval of the action of the Board of Trustees, at its meeting in February, in passing the following resolution

> That all papers read at the annual session be treated as volunteer paper and that the same be published in full in THE JOURNAL or rejected, or published in abstract as may seem best

This action will place THE JOURNAL and its editor on a plane with other similar medical publications, and will automatically cut out the publication of much undesirable and reduplicated matter With reference to the publication of the papers from the Sections on Ophthalmology and Laryngology Otology and Rhinology in separate journals we have deferred action until this subject can be considered by the various sections interested and an expression of opinion be secured from them

REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

Regarding this report your committee again commends it to the House of Delegates for serious consideration The report has been prepared with the greatest care, and we unqualifiedly endorse it for adoption in substance at least to the House of Delegates Unquestionably the adoption of the measures recommended in the report will do much to coordinate the work of the various sections and to divide the time available for scientific work in such a way as to make it most useful and valuable for those who attend the meetings of the sections We recommend the adoption of the by-laws and standing rules suggested by the Council and believe that the adoption of the plan suggested by the Council, as a whole will make for economy of time of members and space in THE JOURNAL. We heartily commend to careful consideration the clearly stated matter contained in this report.

COMMITTEE ON RED CROSS MEDICAL WORK

We desire to approve and commend the report of the committee on Red Cross Medical Work We recommend the House of Delegates to take such action as might help the movement to retain medical students in the medical schools until the course has been completed The experience in England has shown that this is vital and necessary We furthermore recommend that some action be taken which may save the existing hospitals in this country such nurses interns and other medical officers as may be necessary to the efficient operation of the institutions The other recommendations of this committee on Red Cross work are also approved and recommended for endorsement by the House of Delegates

The resolution offered by Dr Arthur McCormack was considered by your committee and it was decided to recommend to the House of Delegates that a committe of five be appointed by the President to present this memorial to the proper government authorities provided the memorial is approved by the House of Delegates

Dr Arthur T McCormack Kentucky, moved that the report be adopted as read Seconded

After discussion by Dr Elmer L Kenyon, Illinois, the motion was put and carried

Report of Reference Committee on Legislation and Political Action

Dr M L Graves, Texas chairman, presented the report of the Reference Committee on Legislation and Political Action, as follows

The Reference Committee on Legislation and Political Action has carefully considered the report of the Council on Health and Public Instruction and desires to commend the Council for the excellent work it has done during the past year, particularly with the diminished appropriations at its command We approve the report of the Council and recommend that the House of Delegates ratify the appointment of the Committee on Child Welfare Work

The committee desires also to express its appreciation and approval of the work of the various subcommittees of the Council, namely, the report of the Committee on Conservation of Vision, the Committee on Cooperation with the National Education Association, the Committee on Women's and Children's Welfare, and the elaborate report of the Committee on Social Insurance, which contains a large amount of valuable information necessary to the understanding of this subject

The report of the Council contains two questions requiring action by the House of Delegates, namely, the resolution regarding the use of alcohol, and the resolutions on social insurance Your reference committee requests more time for the consideration of the resolution on alcohol The resolutions on social insurance are approved, and we recommend their adoption.

We further recommend that the secretary of the Association be instructed to transmit a copy of these resolutions to each constituent state association and to inform each constituent state association that the Council on Health and Public Instruction is willing to cooperate with the state associations whenever social insurance questions are to be considered by the law-making bodies of the respective states

Dr Perry Bromberg, Tennessee, moved the adoption of the report as read

Seconded by Dr Miles F Porter, Indiana, and carried

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr Floyd M Crandall, New York, chairman, presented the report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows

The Reference Committee on Amendments to the Constitution and By-Laws begs to report as follows

The following amendment to the Constitution was introduced at the Sixty-Eighth Annual Session of the American Medical Association

> No Trustee shall be eligible to any other elective office, the term of which runs concurrently with the term for which the said trustee has been elected

The committee recommends its adoption

The committee recommends the following amendment to Chapter XI, Section 4, paragraph (*c*) by the introduction of the following words, "and in accordance with rules and regulations enacted by the House of Delegates," so that the paragraph shall read

> Secretary —The secretary shall keep a record of the proceedings of the section in a book provided for such purpose, shall with the cooperation of the chairman, and in accordance with rules and regulations enacted by the House of Delegates, arrange the program, and shall, at least thirty days before the Scientific Assembly forward it to the Secretary of the Association for insertion in the official program and shall perform such other duties pertaining to his office as may be provided by the by laws of the Association or of the section

The committee recommends that Chapter XI, Section 12, be amended to read

> Number of Papers on Program —The number of papers, including addresses on the program of any section shall not exceed six in each unit assigned to the section, by the rules and regulations enacted by the House of Delegates, provided, however, that no section may list more than thirty papers on its program

The committee recommends that Chapter XI, Section 3, be amended by substituting for the first sentence, which reads "The election of officers of the several sections shall be the first order of business of the next preceding the final meeting of the section at each Scientific Assembly except when the section holds but one meeting," the following

> Election of Officers —The election of officers of the several sections shall be the first order of business of the next preceding the final meeting of the section at each Scientific Assembly, provided, however that when a section shall hold not more than two meetings at any annual session, these officers shall be elected at the final meeting

Standing Rules

The committee recommends the following Standing Rules for the government of the Scientific Assembly

1 The term "unit" shall signify a single meeting of a session at an annual session

2 Not more than six numbers shall be listed on the scientific program of any one unit, and further no section shall list more than thirty papers (the number to which a section is limited by the By Laws of the Association) at any one annual session, distributed among all the units assigned to it

3 The sessions of the Scientific Assembly shall be limited at each annual session to the maximum number of units listed in the appended table

Practice of Medicine	6 units
Surgery, General and Abdominal	6 units
Obstetrics, Gynecology and Abdominal Surgery	6 units
Ophthalmology	6 units
Laryngology, Otology and Rhinology	6 units
Diseases of Children	3 units
Pharmacology and Therapeutics	3 units
Pathology and Physiology	3 units
Stomatology	2 units
Nervous and Mental Diseases	3 units
Dermatology	3 units
Preventive Medicine and Public Health	3 units
Genito Urinary Diseases	3 units
Orthopedic Surgery	3 units
Gastro Enterology and Proctology	2 units

4 Those sections to which three or a less number of units are assigned shall hold one meeting on each of the days of the annual session during which section meetings are held

5 The Council on Scientific Assembly shall apportion the morning and afternoon units at each annual session to the several sections.

The report was considered section by section, and on several motions, duly seconded and carried, they were adopted with the exception of the section distributing the units to the different sections of the Scientific Assembly This section, on motion of Dr W C Fisher, delegate from the Section on Stomatology, was amended by substituting three units for two units, as recommended by the reference committee

The motion to amend was duly seconded and carried

Dr Horace G Wetherill, Colorado, moved that the report of the reference committee, as amended, be adopted

Seconded and carried

Dr Floyd M Crandall, New York, offered the following amendments Amend Chapter XI, Section 7, by adding the following, "16 Miscellaneous Topics," and amend Chapter VII, Section 7, of the By-Laws, by adding the words

> The Council on Scientific Assembly is authorized to appoint officers for the meetings making up the section on miscellaneous topics

Dr Southgate Leigh, Virginia, rose to a point of order He stated that the House had already adopted the recommendation of the Reference Committee on Reports of Officers which recommended the adoption of the assignment of units to the sections of the Scientific Assembly as reported by the Reference Committee on Amendments to the Constitution and By-Laws, and that the amendment to the report of the Reference Committee on Amendments to the Constitution and By-Laws was in conflict with an action previously taken by the House

The chairman declared the point well taken

Dr Horace G Wetherill, Colorado, moved a reconsideration of that portion of the report of the Reference Committee on Reports of Officers Distributing the units to the sections, and that the assignments of units made in the amended report of the Reference Committee on Amendments to the Constitution and By-Laws be adopted

Seconded and carried

New Business

Under the head of "New Business," Dr William J Cruikshank, New York, presented the following preambles and resolutions which were referred to the Reference Committee on Legislation and Political Action

> Whereas Chapter 7 Section 4 of the By Laws of the Medical Society of the State of New York has been amended to read "The Committee on Legislation shall consist of a chairman to be elected by the House of Delegates and of the chairmen of the legislative committees of the constituent county societies" And
>
> Whereas, The Medical Society of the State of New York has shown by the adoption of this amendment that it recognizes the fundamental principle that all questions on medical legislation which may affect the whole state should primarily be referred to the state society, that attempts at handling such questions should not, as heretofore, be left to the spasmodic effort of the unorganized few, and that what is needed for successful operation is a permanent representative organization that shall reach every smallest part of the state and
>
> Whereas, The plan here to be outlined has, for some time, been in operation in the Medical Society of the County of Kings in the State of New York and has been found to be effective therefore be it
>
> *Resolved* That the present organization of the legislative committee of the Medical Society of the State of New York and of the Medical Society of the County of Kings in the State of New York be recommended by the American Medical Association to the state and county societies of the several states And be it further
>
> *Resolved* That the plan recommended be as follows The chairman of the legislative committee of the state society to be chosen if [illegible]

from the state capital The legislative committee of each county society to be so arranged that it shall always consist of a physician from each legislative district The duty of the chairman of the legislative committee of the county society by reason of the fact that he is also a member of the legislative committee of the state society to be to give to the members of his committee information coming to him, from the chairman of the legislative committee of the state society, to advise them in regard to proposed medical legislation that may need to be combated or furthered and to get from them information arising from their interviews or correspondence with the legislators of their respective districts

The duty of the members of the legislative committees of the county societies to be to ascertain the views or position on medical legislative matters as they arise of the state legislators from whose districts they were appointed and to try to influence these legislators in favor of proper medical legislation against mischievous medical legislation And further be it

Resolved That the American Medical Association recommends that the machinery of such an organization be put in operation as soon as possible believing that its use would result in successfully combating pernicious medical legislation and furthering proper and necessary medical legislation

Dr Samuel J Meltzer New York delegate from the Section on Practice of Medicine, offered the following resolution which was referred to the Reference Committee on Miscellaneous Business

In noticing with profound gratification the fact that numerous distinguished physicians of our country were among the first to offer their services to the government and to respond to its call to serve in their capacity as medical men on the battlefields of our allies in Europe the American Medical Association at its Sixty Eighth Annual Session expresses herewith its confidence to the entire medical profession that all its members will stand by the government in its present national need and offer willingly their services whenever they are called on and in whichever capacity they are capable of rendering them at the same time the Association wishes to remind the members of the profession that the duties and rights of medical men are clearly defined and protected by the international Hague Conventions of which our country is one of the signatory powers and expresses herewith the hope that the standard of the actions of the medical men of our country during the war wherever executed will be of such a character that it will bring honor to our profession as well as to our country

Dr R M Funkhauser Missouri rose to a question of personal privilege and asked what disposition if any, had been made by the Judicial Council of a request which he had presented to the House of Delegates at the Detroit session through the Reference Committee on Amendments to Constitution and By-Laws

He now desired to make an additional inquiry and asked why one who is or has been a member of the organization, should not be required to obtain membership at a new location on a transfer rather than by application *de novo*?

The chairman of the House of Delegates directed the secretary to bring this question to the attention of the Judicial Council with the request that the Council report concerning the matter at the next meeting of the House of Delegates

Dr Arthur T McCormack, Kentucky, presented the following resolution which was referred to the Reference Committee on Legislation and Political Action

Whereas The protection of the national health is a measure of vital importance in peace and especially in war and

Whereas The governor of the State of New York by his untiring and public spirited efforts aided by the New York Academy of Medicine has proffered the New York quarantine etc to the federal government and

Whereas Congress has not yet appropriated the funds which are necessary to complete the transfer of said New York quarantine therefore be it

Resolved That the House of Delegates of the American Medical Association urges on Congress the importance of making immediately the appropriations with which to effect the transfer of the New York quarantine to the national government.

Dr Arthur T McCormack, Kentucky, asked that the privileges of the floor be extended to Dr Seale Harris, Alabama, to permit him to discuss a question relative to food conservation

Dr C L. Stevens Pennsylvania, moved that Dr Harris be granted five minutes

Seconded and carried

Dr Harris then addressed the House, suggesting the following resolution which was received by the House and referred to the Reference Committee on Hygiene and Public Health

Whereas Those in position to know warn us that the American people are facing an alarming food shortage, particularly of meats and of wheat products and

Whereas, If the laboring classes are deprived of these necessities to health and life tuberculosis and many other diseases will increase very rapidly—it is said that tuberculosis has increased 500 per cent in Berlin since meats and fats have almost disappeared from the German markets and that in France the white plague' and other diseases have increased enormously since the war began, and

Whereas, In the United States diseases of the arteries kidneys heart and brain (the degenerative diseases) have increased about 20 per cent in the last thirty years, due partly to overeating particularly of meats, and

Whereas The food problem both among those who may be deprived of meats and bread and among the prosperous who may be shortening their lives by overeating, is a question of vital importance to the health of the nation and

Whereas The U S Food Commission with a patriot and an American of such distinguished ability as Mr Herbert Hoover at its head has wonderful opportunities for controlling food prices and in educating the public regarding food values and rational eating therefore be it

Resolved 1 That the American Medical Association in convention assembled in New York City June 5 1917, recognizing the food problem as a public health question urges the people of the United States to conserve the food supply by eating less meat (many authorities say that it is harmful to eat more than one small portion of meat a day) and by eating more of corn rice and barley products as substitutes for foods made from wheat

2 That the U S Senate and House of Representatives be urged to expedite pending legislation giving the Food Commission powers and means to control prices and to handle the food supply as it may think best for the American people

3 That the Food Commission be requested to appoint a scientific committee composed of physicians and other experts on diet and nutrition to act without pay in an advisory capacity and to provide means for said scientific committee to carry on a campaign of education to inform the public regarding the normal nutritional needs of the human body and of the dangers from overeating, as well as to warn the public that high prices will deprive both the poor in our country and our allies in Europe of meats bread and other foods that are necessary for the health efficiency and even life itself

4 That copies of these resolutions be sent to President Woodrow Wilson Food Commissioner Herbert Hoover the U S Senate and House of Representatives and that copies be furnished the press

Dr Horace G Wetherill Colorado, offered the following amendment which was referred to the Reference Committee on Amendments to the Constitution and By-Laws

To amend Section 3 Chapter VII of the By Laws adding under classification (f) to the standing committees the words Executive Committee That the following be added as Section 9 and the present sections from 9 on to be renumbered

The Executive Committee for the House of Delegates —The Executive Committee shall consist of the President of the Association the chairman of the House of Delegates, the secretary and the chairmen of the Board of Trustees of the Judicial Council, of the Council on Health and Public Instruction of the Council on Medical Education and of the Council on Scientific Assembly

In the event of death resignation or removal of any of these the place so made vacant on the Executive Committee shall be filled by the one authorized to perform the duties of the respective office The Executive Committee shall act for the House of Delegates in the interval between the annual sessions of the House, when the House itself is not in special session

All actions taken by the Executive Committee, in order that they be adopted must be supported by not less than three fourths of the members of the Executive Committee

Also in order to prevent conflicts delete from Chapter_VI Section 1 sentence near the bottom of page 14 reading as follows In case of a vacancy in the office of Treasurer or Secretary on account of death or otherwise the vacancy shall be filled by the Board of Trustees until the next annual session of the House of Delegates and the last sentence of Section VI to read During the intervals between the sessions of the House of Delegates, the Board of Trustees shall supervise the action of committees constituted by the action of the House"

Dr Horace G Wetherill Colorado offered the following amendment to Chapter V, Section 5, of the By-Laws, by cutting out the words 'or the General Manager," which was referred to the Reference Committee on Amendments to the Constitution and By-Laws

Dr John MacDiarmid, Florida, offered the following communication, which was referred to the Reference Committee on Miscellaneous Business

Hon Woodrow Wilson Washington D C

The American Medical Association in convention assembled representing more than 70 000 physicians of the United States, commending your patience as long as patience was a virtue endorses your manly and patriotic action at this critical hour of our national life, when German autocracy ignoring the common rights of man is waging inhuman war upon democracy and humanity and pledges to you our hearty and active cooperation

Dr Floyd M Crandall, New York, offered the following amendment to Article 9, Section 1, of the Constitution, which will lie over until the next annual session of the House of Delegates

The Committee on Amendments to the Constitution and By-Laws submitted the following amendment to Article 9 Section 1, of the Constitution

> Amend by striking out the words "Chairman and Vice Chairman of the House of Delegates," and substituting the words "Speaker and Vice Speaker of the House of Delegates"

Report of the Reference Committee on Medical Education

Dr William S Lalor, New Jersey, chairman, presented the report of the Reference Committee on Medical Education, as follows

Your committee, to which the report of the Council on Medical Education was referred, reports as follows

We recommend that the report be endorsed as a whole *No one can read and study this report* and consider the results obtained without being impressed with the profound influence of the Council's work on the present and future welfare of the medical profession in this country The reasonably high standards of preliminary education which have been established insure well qualified students who, with the improved training now obtainable in the majority of medical colleges, cannot fail to be a credit to the profession they have adopted and of greater service to the public

It is pleasing to note that during the last several years so large a proportion—over 70 per cent—of all medical graduates are from the Class A medical schools, and are in position to render service of a high order to the government in the present national crisis Your committee endorses the Council's statement that there should be no lowering of educational standards or shortening of the medical course, although the emergency may require certain changes in methods of procedure

The Council should be commended on the establishing of the Student's Register, which not only is a permanent record of the qualifications of all medical students but also enables the Council to know definitely whether medical schools are upholding reasonable standards for admission

The Council's list of approved hospitals is of much service to medical graduates in obtaining internships This work should be continued so that other worthy hospitals may be included in subsequent lists Your committee believes that a most important and urgent work remaining to be accomplished by the Association is a more extensive investigation of the hospitals as to their ability to furnish intern training of a sufficient value to be accepted by state licensing boards as the final year of the medical course Your committee recommends that an appropriation of $2,500 each year for three years be made for this purpose

Your committee calls especial attention to Table 5, on page 176 This shows that of the 3,877 physicians coming from colleges of known classification who were licensed during 1916, nearly 80 per cent were graduates of Class A colleges We recommend that the attention of each state medical society be called to the record of their state

Your committee recommends that the action taken by the Council in its ratings of medical colleges be approved and ommends the publication of the ratings with the changes mended by the Council

committee wishes to commend the Council on the results of its work during the last fourteen years

William Smith Lalor, Chairman
L W Littig
Dean Lewis

Bromberg, Tennessee, moved that the report

r C E Cantrell, Texas, and carried

eference Committee on Hygiene and Public Health

r, District of Columbia, chairman, presented the Reference Committee on Hygiene follows

mously endorses the resolution pre- T McCormack and recommends its

sidered the resolution relative to ommittee feels that inasmuch as this matter has been considered by Congress, and the national government is taking steps in this direction, it is inexpedient to proceed farther with the matter at present, and the committee *so recommends* to the House, and advises that the communication be laid on the table

On motion, duly seconded and carried, the recommendations of the committee were concurred in

Dr Oscar Dowling, Louisiana, a member of the Board of Trustees, called the attention of the House of Delegates to the practice, not uncommon among physicians, of giving letters of recommendation and testimonials relative to the therapeutic merits of drugs and combinations of drugs without careful scientific investigation He made the suggestion that this practice should be condemned by an organization of scientific physicians

The chairman of the House of Delegates requested Dr Dowling to present his suggestion in writing for the consideration of the House

Dr H M Brown, Wisconsin, addressed the House on the question of taking action relative to memorializing Congress praying that it revoke the patent rights of salvarsan and neosalvarsan

Dr C E Cantrell, Texas, suggested the extending of the memorial to cover other patented pharmaceutical products The question was also discussed by Dr Floyd W McRae, Georgia

At the suggestion of the chair, a motion was made, duly seconded and carried, authorizing the appointment of a special committee of three to frame a resolution covering this question, and directing the secretary to transmit the resolution drafted by the special committee to the Reference Committee on Hygiene and Public Health The committee appointed consisted of Drs H M Brown, chairman, C E Cantrell, and F W McRae

The committee reported the following resolutions, which were transmitted to the reference committee as directed

> *Resolved* That the 86,000 medical men, represented by the House of Delegates of the American Medical Association, urge on the Congress of the United States the imperative necessity of immediate steps being taken to abrogate the German patents on the manufacture of salvarsan in this country to the end that the people of the United States may have at their command an available means for rapidly controlling the spread of syphilis Be it further
>
> *Resolved* That Congress is urged to consider the abrogation of other important patents now held by Germans which interfere with the manufacture of drugs useful to the people of the United States

The Committee on Credentials presented, through its chairman, Dr D Chester Brown, Connecticut, the following amendment to the rules for the guidance of the Committee on Credentials

> To be substituted for Paragraph 1 of the rules adopted June 6, 1912
>
> Credentials shall be of two parts. The first part shall be sent to the office of the secretary of the American Medical Association by the secretary of the constituent association, not later than seven days prior to the first day of the first meeting of the House of Delegates and shall be a list of delegates and alternates for that association"

This amendment was referred to the Reference Committee on Amendments to the Constitution and By-Laws

On motion, duly seconded and carried, the House of Delegates then adjourned to meet Thursday, at 2 p m

Third Meeting—Thursday Afternoon, June 7

The House of Delegates met at 2 p m, and was called to order by the chairman

Dr D Chester Brown, Connecticut, chairman, presented a supplementary report of the Committee on Credentials

Dr C E Cantrell, Texas, moved that the report be adopted, and the delegates reported be seated

Seconded and carried

The secretary called the roll and 100 delegates responded Later twelve additional delegates reported their presence

The chairman announced a quorum present

Dr E Eliot Harris, New York, called the attention of the House to the presence of Dr Abraham Jacobi, an ex-President of the Association

Dr Jacobi addressed the House, expressing his appreciation of the opportunity to look into the faces of many of the delegates whom he had known before and to shake hands with them

The minutes of the previous meeting were read and approved

Election of Officers

The next order of business being the election of officers, the House proceeded to an election, which resulted in the choice of the following

President—ARTHUR DEAN BEVAN, Chicago

First Vice President—EDWARD H BRADFORD Boston

Second Vice President—JOHN MCMULLIN U S Public Health Service, Washington D C

Third Vice President—LAWRENCE LITCHFIELD Pittsburgh

Fourth Vice President—HOLMAN TAYLOR Fort Worth, Tex

Secretary—ALEXANDER R CRAIG Chicago

Treasurer—WILLIAM ALLEN PUSEY Chicago

Chairman of the House of Delegates—HUBERT WORK, Pueblo Colo

Vice Chairman of House of Delegates—DWIGHT H MURRAY, Syracuse N Y

Members of the Board of Trustees—PHILIP MARVEL, Atlantic City N J, W T SARLES Sparta Wis, H BERT ELLIS Los Angeles The resignation of W T COUNCILMAN, Boston, having been received and accepted with regrets WENDELL C PHILLIPS New York was selected to fill the unexpired term

The House approved the following nominations of the President

Judicial Council—RANDOLPH WINSLOW Baltimore

Council on Health and Public Instruction—WALTER B CANNON Boston

Council on Medical Education—WILLIAM PEPPER, Philadelphia and to fill the place made vacant by the election of Arthur D Bevan to the presidency, H GIDEON WELLS, Chicago

Council on Scientific Assembly—E S JUDD Rochester, Minn

The President Dr Charles H Mayo then addressed the House and said that nearly all great bodies looked after the destitute those that were rendered so by sickness or those who left their families destitute He knew of men in the medical profession who were paralyzed and who lived on a mortgage of their life insurance which was meant for the use of their families He hoped and believed that this year the American Medical Association would start the nucleus for a fund that can be used by the Board of Trustees for the care of such members of the profession and their families as were deserving

The secretary presented a list of applicants for associate fellowship endorsed by the Judicial Council the Section on Stomatology the Section on Pharmacology and Therapeutics, the officers of the Section on Pathology and Physiology the officers of the Section on Preventive Medicine and Public Health and a nomination for Honorary Fellowship from the Section on Orthopedic Surgery the latter to be *approved by* the Council on Scientific Assembly

It was moved that the secretary be authorized to cast a ballot of the House in each instance in which the applicant is not eligible for membership in the state association of the state in which he resides and provided no objection to the applicant is filed by the officers of such state association

Seconded and carried

Address by the President of the Association

At this juncture the business of the House was suspended The chairman introduced *Dr Bevan, President Elect,* who said

Mr Chairman and Members of the House of Delegates You are so busy this afternoon that you do not want to hear me talk, and I have very little to say

I want to thank you for the great honor that you have conferred on me in electing me President of the American Medical Association Frankly however I regard it rather as an expression of confidence and in honor of the movement in connection with medical education that was initiated fifteen years ago with which I have been fortunately actively identified I have been tremendously impressed with the possibilities of the American Medical Association from my experience in the work of the Council on Medical Education I have been impressed with the possibilities that when the organized profession of this country seriously undertakes to carry out certain reforms it will be successful This is shown in the splendid work of THE JOURNAL and in the Council on Pharmacy and Chemistry and in many other activities of the Association

I am a member of several special societies, but my membership in the American Medical Association means more to me than does my connection with any other medical organization in this country and I think it means more for any man in American medicine (Applause)

Medicine is not only a science, but it is today one of the great functions in civilization and the American Medical Association represents the organized profession in this country I believe it has a very important part to play in the future development of this country in many ways, and I think if we all realize what can be done by an organized profession and work together intelligently, we shall not only accomplish a great deal of good for the medical profession and for medicine, but for the people of the United States (Applause)

The Health of Our Soldiers

Dr Frank Billings Illinois, rose to a question of personal *privilege* which was granted and said

Any one who has been in touch with the conditions of health of our recruits, both in the navy and army since we are in a state of war must have been impressed with the fact that there is something wrong At different places we hear fault found with our army medical department and with the navy medical department There are scandals regarding certain epidemics of cerebrospinal meningitis, of scarlet fever, of measles and pneumonia among the young men called to the service and now that conscription is with us and 500 000 recruits are to be concentrated in camps, we ask ourselves the question of what is to become of these young men We have not far to go if we understand things, for an answer In times of peace even the medical departments of the army and navy have not the power commensurate with the responsibilities and now in time of war these responsibilities are greater and their power is not greater but less if anything Do you want me to give you one or two concrete examples?

Since registration has taken place and conscription faces us contracts have been let for sixteen concentration camps and barracks These barracks are to be of wood and steel rooms holding 600 soldiers, and the amount of space allotted to each is 300 cubic feet This matter is in charge of the *quartermaster's department* They may reach the surgeon-general, he may O K it or disapprove of it, but he cannot stop it The army medical officers themselves cannot demand or expect to receive any change in this routine They must depend on us as civilians to bring about a change through the influence we may have with the administration at Washington We must not act hastily We must formulate methods At this time of war, for instance the war college should have a representative in it of the medical department It has not now and never has been given one We conceive that the health of our boys both in the navy and in the army, in recruiting stations and in the field is one of the most important functions and powers of war We must do something to help our three surgeons-general I do not want further to take up your time, but simply intimate this to you They are glad to receive help We want to give them help in the right way and after a conference with officers of the army and with Dr Welch who has made examinations of certain of these camps I ask that this House appoint a committee to draft resolutions to be forwarded to the President of the United States I do not ask that this be done now We should have a commission or committee with power, after a conference with Surgeon-General Gorgas, Surgeon-General Braisted and Surgeon-General Blue to formulate resolutions to the President that may be helpful in obtaining the power they need to guard the health of our soldiers

Dr C E Cantrell, Texas moved that a committee of five, with power be appointed by the Chairman of the House, for this purpose

Seconded and carried

Place of Annual Session

The next order of business being the selection of a place and fixing the time for the annual session of 1918, Dr A B Walker, Ohio, moved that the privileges of the *floor* be extended to Dr E O Smith, Cincinnati, president of the Ohio State Medical Association

Seconded and carried

Dr Smith extended a warm invitation for the Association to hold its next annual meeting in Cincinnati

Dr Charles J Whalen, Illinois, extended an invitation to the Association to hold its next meeting in Chicago

Dr E Eliot Harris, New York, moved that no further invitations be received, and the House proceed to a ballot

Seconded and carried

It was suggested that if unanimous consent be accorded, the place of the next annual session could be determined promptly by a rising vote

Unanimous consent having been obtained, a rising vote was then taken, which resulted in Chicago being selected

Dr J B Blake, Massachusetts, moved that the time of meeting be left to the Board of Trustees

Seconded and carried

Report of Reference Committee on Miscellaneous Business

Dr J B Blake, Massachusetts, Chairman, presented the following report of the Reference Committee on Miscellaneous Business

Your committee has the honor to present the following report

Two matters were referred to this committee and have received careful consideration The first, a resolution offered by Samuel J Meltzer, delegate from the Section on Practice of Medicine, for which your Reference Committee recommends the adoption of the following substitute

> In noticing with profound gratification the fact that numerous distinguished physicians of our country were among the first to offer their services to the government and to respond to its call to serve in their capacity as medical men on the battlefields of our allies in Europe, the American Medical Association, at its Sixty Eighth Annual Session, expresses herewith its confidence to the entire medical profession that all its members will stand by the government in its present national need and offer willingly their services whenever they are called on and in whichever capacity they are capable of rendering them, and that wherever executed, their services will be of such a character that they will bring honor to our profession, as well as to our country

The second, a communication, presented by John MacDiarmid, Florida, is as follows

> *Hon Woodrow Wilson Washington, D C* The American Medical Association, in convention assembled, representing more than eighty thousand physicians of the United States, commending your patience as long as patience was a virtue, endorses your manly and patriotic action at this critical hour of our national life, when German autocracy, ignoring the common rights of man, is waging inhuman war on democracy and humanity, and pledges to you our hearty and active cooperation

The committee recommends its adoption

John Bapst Blake,
Alexius McGlannan,
Harry P Ritchie,
D E McGillivray

Dr Arthur T McCormack, Kentucky, moved that the report be adopted

Seconded and carried

Tribute to Alexander Lambert

Dr Arthur T McCormack, Kentucky, asked unanimous consent, which was granted, to present the following personal tribute to Major Alexander Lambert, of the Medical Reserve Corps of the United States Army, who is about to depart for oversea duty

Dr Alexander Lambert, *Sir* —You came to the House of Delegates many years ago, already the honored son of your illustrious father, famed from infancy, into the most cherished traditions of the profession You have added dignity to the state you have so well represented by constantly and effectively contending for all that is best for the physicians of America, and for the people whom they serve

A true physician yourself, we recognize your numerous contributions to the science of medicine It is unnecessary, here, to enumerate them, but because of its tremendous practical importance, as a matter of restoration to healthy usefulness and self-respect of so large a class of unfortunates, we especially congratulate you on your success in devising, perfecting and giving to the profession, and the world, a successful treatment of drug and alcohol addicts

Recognizing your sense of fairness, your tact, your correct and accurate perception of justice, your colleagues long ago chose you as the Chief Justice of the Supreme Court of Medicine—the Judicial Council of the American Medical Association You have occupied the position with dignity and honor, and, through your broad conception of its functions, you have advanced not only the popular but also the professional conception of the duties of the physician to himself and to the state, and of the state toward safeguarding the health of all those who by productive labor support it

Bred in the principle of medicine, you have constantly maintained its highest standards It is with a deep feeling of real pride, therefore, that we, your colleagues of the House of Delegates of the American Medical Association, recognized you as our special representative with our armed forces overseas in this war, in which justice, equity, right—all three things, Sir, which you, in your own person, so ably represent, are the causes for which our country and its allies fight

We bid you Godspeed, and in your firm hand and your true heart we confidently place the guardianship of our honor, knowing that it is safe

On motion, duly seconded and carried, the House concurred in the sentiment expressed in Dr McCormack's communication and directed that it be spread on the minutes

Dr Alexander Lambert was called to the platform, was warmly received, and said

Gentlemen I am going to new fields I will do my best to live up to your good opinion of me, and I thank you (Applause)

Supplementary Report of the Judicial Council

Dr Alexander Lambert, New York, chairman, presented the following supplementary report of the Judicial Council

Relative to the inquiry submitted by Dr R M Funkhouser, Missouri, as to what, if anything, had been done in connection with the subject which Dr Funkhauser presented to the Reference Committee on Amendments to the Constitution and By-Laws which was submitted to the House of Delegates at the second meeting of last year's annual session

> The following amendment to Chapter VIII, Section 6, of the By Laws was presented to the chairman of the committee yesterday by Dr Robert M Funkhauser of Missouri As it was not presented to the House of Delegates, it could not be acted on The committee, however, considered the question at considerable length and decided to present it to the House at this session
>
> No person can become an Associate Fellow who can be a member of the American Medical Association in the regular way"

The Judicial Council is of the opinion that there should be no change in the by-laws defining and regulating Associate Fellowship

In reply to the inquiry Dr Funkhauser submitted at this session, there are doubtless instances of illegal membership in the American Medical Association, unknown and unrecognized, many of them occasioned by the migration of physicians from state to state, and the obtaining of membership at the new location to which these physicians have gone This has come about because the procedure defined in the by-laws and the standing rules is not carefully followed, and is usually due to the neglect to obtain a transfer card from the society the member has left to the society at his new location Frequently, unpaid dues are left behind and yet the physician is given membership at his new location This causes much confusion and is due to the failure of the societies to insist on the applicant showing a clear record from the society he has left The Judicial Council feels that the confusion is due to failure to comply with existing by-laws and standing rules and that it is unwise to add new rules and regulations to govern this transfer of membership from one society to another until public opinion in component societies enforces the fulfilment of the already existing rules

The Judicial Council has authorized the following reply to be sent to the official communication received by this House of Delegates from the Mississippi State Medical Association

> In accordance with the advice already mailed to you, your letter of May 17 was transmitted to the House of Delegates of the American Medical Association at the opening meeting of the 1917 annual session On motion, duly seconded and carried, the House referred your communication to the Judicial Council for a reply
>
> The Judicial Council at a meeting held in New York City, June 5 took this official communication from a constituent association of the American Medical Association under advisement and after careful deliberation begs leave to reply
>
> The careful reading of the section of the by laws giving appellate jurisdiction to the Judicial Council will show that the only matters which can be appealed to the Judicial Council are questions of law and procedure, not of fact This leaves the question of discipline and the questions of fact concerning whether or not a member should be disciplined where it belongs, in the county societies, where it has always been The appellate jurisdiction given to the Judicial Council in simple language means this, that any member of a county society, or state association—any member of the American Medical Association—may appeal to the Judicial Council if in the course of some dispute he is not given what he considers to be his just rights in questions of law or procedure

The qualifications of membership in county societies are not involved in this question at all because only those already members of the association may avail themselves of the protection of this appeal

If the appellate powers of the Judicial Council are contrary to democratic principles the concept of democratic principles, as held by your honorable body, is at variance with the accepted concept of fair play The Judicial Council of the American Medical Association believes that the preambles and resolutions transmitted to the House o Delegates by you are based on a misconception of the appellate powers actually vested in the Judicial Council The Judicial Council believes that when its appellate jurisdiction is accurately comprehended by the Mississippi State Medical Association, the wisdom of the existence of these appellate powers will be fully recognized

Dr Frederick L. Van Sickle, Pennsylvania, moved that the report be adopted

Seconded and carried

Report of Reference Committee on Legislation and Political Action

Dr M L. Graves, Texas, chairman, presented the report of the Reference Committee on Legislation and Political Action, as follows

The resolution regarding recommendations to the constituent state association proposing a plan for the appointment of committees on legislation and political action, has been considered by the committee and inasmuch as the plan has not been in operation for a sufficient length of time to establish its effectiveness your committee recommends that this resolution be referred to the Council on Public Health and Instruction

The resolution to memorialize Congress and urge the appropriation of funds immediately to take over the New York quarantine by the national government was referred to this committee We learn that the same resolution has already been considered and reported by the Reference Committee on Hygiene and Public Health and inasmuch as the recommendation of that committee meets with the approval of this committee, and the House has already acted on same, it would appear that no further action is necessary

The following resolution on alcohol, submitted by the Council on Health and Public Instruction, has been gravely considered by your committee

WHEREAS It is the unanimous opinion of the Council on Health and Public Instruction of the American Medical-Association that alcohol has no drug value either as a stimulant as a tonic or as a therapeutic agent and that it has no food value and

WHEREAS Its use as a beverage or as a therapeutic agent is detrimental rather than beneficial to the individual therefore be it

Resolved That the House of Delegates of the American Medical Association at its Sixty Eighth Annual Session declares it is opposed to the use of alcohol by individuals either as a medicine or as a beverage and be it further

Resolved That its use in medicine is permissible only in the preparation and preservation of pharmaceutical products

Since the first premise of these resolutions expresses an opinion held by the Council and since the expressions of opinion from numerous members of the House and the Association lead us to the conclusion that the status of alcohol in medicine is still undetermined your committee begs to amend the resolutions by substituting the following

WHEREAS We believe that the use of alcohol as a beverage is detrimental to the human economy and

WHEREAS Its use in therapeutics as a tonic or a stimulant or as a food has no scientific basis therefore be it

Resolved That the American Medical Association opposes the use of alcohol as a beverage and be it further

Resolved That the use of alcohol as a therapeutic agent should be discouraged

It was moved that the report be adopted Seconded

Dr R A Hatcher, New York delegate from the Section on Pharmacology and Therapeutics moved to substitute the following resolution for the resolution on alcohol offered by the Reference Committee on Legislation and Political Action, and advised the House that the substitute which he offered was presented at the direction of the Section on Pharmacology and Therapeutics after having been adopted by that section

The Section on Pharmacology and Therapeutics instructs its delegates to the House of Delegates that it is the sense of this section that the question of the therapeutic value of alcohol which has been long in dispute remains yet undetermined and that hasty action taken in the stress of present circumstances would not be wise and would not reflect fully the best therapeutic and pharmacologic opinions

Furthermore while recognizing the possible need of prohibition of the use of alcohol as a measure of public safety it would ask that the two questions be considered separately on their respective merits

After discussion by Drs Samuel J Meltzer, New York, R A Hatcher, New York, Walter T Williamson, Oregon, Stewart R Roberts, Georgia, Cyrus L Stevens, Pennsylvania, Arthur T McCormack, Kentucky, and George A Moleen Colorado, the chairman put the substitute motion, which was lost

Dr E Eliot Harris, New York, moved to amend by striking out from the resolution offered by the Reference Committee on Legislation and Political Action all that relates to the therapeutic use of alcohol Seconded

After discussion by Dr M L Graves, Texas, the amendment was put and lost

The motion to adopt the report of the Committee as presented was put and carried

Report of Reference Committee on Hygiene and Public Health

Dr Arthur T McCormack, Kentucky, presented the report of the Reference Committee on Hygiene and Public Health

The Reference Committee on Hygiene and Public Health reports on the resolution offered by Dr H M Brown, Wisconsin, and recommends the following substitute for the resolution presented

Resolved That the American Medical Association urges on the Congress of the United States the imperative necessity of immediate steps being taken to abrogate all the German patents on the manufacture of salvarsan and allied products in this country, to the end that the people of the United States may have at their command an available means for rapidly controlling the spread of syphilis

The following preambles and resolution have come to the reference committee from the Section on Preventive Medicine and Public Health with the endorsement of that section and are recommended for adoption by the House of Delegates

WHEREAS The protection of the national health is a matter of paramount importance particularly at the present time and

WHEREAS To accomplish this it is necessary that there be a close integration of all the health agencies of the nation, the states and the municipalities therefore be it

Resolved That the Section on Preventive Medicine and Public Health urges the House of Delegates to memorialize Congress to the end that Senate Joint Resolution No 63 be speedily enacted into law

Your committee reports recommending the adoption of a second set of preambles and resolutions which have been adopted by the Section on Preventive Medicine and Public Health and are transmitted through your reference committee These resolutions are as follows

WHEREAS Venereal infections are among the most serious and disabling diseases to which the soldier and sailor are liable and

WHEREAS, They constitute a grave menace to the civil population and

WHEREAS The Congress of the United States has authorized the President and has empowered and directed the secretary of war to control prostitution and alcohol within effective zones surrounding all military places and

WHEREAS The Council of National Defense has adopted resolutions outlining a general policy for the combating of venereal diseases and

WHEREAS A grave responsibility rests on the civil population and particularly the medical profession for participation in making effective these and other measures for the eradication of venereal diseases therefore be it

Resolved That the American Medical Association endorses the actions of Congress and the Council of National Defense and commends the following as the basis for a program of civil activities

1 That sexual continence is compatible with health and is the best prevention of venereal infections

2 That steps be taken toward the prevention of venereal infections through the prevention of prostitution and by the provision of suitable recreational facilities the control of alcoholic drinks, and other effective constructive measures

3 That plans be adopted for centralized control of venereal infections through special divisions of the proper health and medical services

4 That the hospitals and dispensaries be encouraged to increase their facilities for early treatment and follow up service for venereal diseases as a measure of national efficiency

5 That the members of the medical profession be urged to make every effort to promote public opinion in support of measures instituted in accordance with these principles of action in the control of venereal diseases.

A third set of preambles and a resolution adopted by the Section on Preventive Medicine and Public Health are herewith transmitted and action will be called for subsequently during this meeting

These preambles and resolutions are as follows

WHEREAS Preventive medicine is a subject of growing importance, and

Whereas, The section on Preventive Medicine and Public Health of the American Medical Association brings many who are interested in public health work to its meetings, and

Whereas, The consideration of special subjects relating to preventive medicine requires additional time rather than restricted time, and

Whereas, It is of the utmost importance that preventive medicine be not alienated from the other branches of medicine, and be dissipated among a multiplicity of special health organizations, therefore, be it

Resolved, That the Section on Preventive Medicine and Public Health hereby petitions the House of Delegates that its work at the annual sessions be extended to six units, and that it be permitted to hold two meetings daily until its work is completed

On several motions, duly seconded and carried, the several sections of the report were adopted

Supplementary Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr Floyd M Crandall, New York, chairman, presented the following supplementary report of the Reference Committee on Amendments to the Constitution and By-Laws

The following communication, presented by Dr R M Funkhouser of St Louis was referred to this committee

Dr R M Funkhouser of St Louis moved that the delegates to the next meeting of the A M A. be instructed to take up the question of transfer of members from one unit society of one state to a unit society of another, as there are cases where members of one state, delinquent or not, go to another state without a transfer card and illegally become members of a unit society in another state This subject should be brought to the attention of the proper authorities at the coming meeting of the A M A, and properly settled No member of a unit society should be permitted to join or should be accepted in a unit society of another state unless the said member desiring membership in another state shall conform to the laws which demand all dues be paid and a proper transfer be obtained from the unit society from which the transfer is desired

After prolonged deliberation, the committee decided that in its judgment the matter was completely covered by Chapter VIII, Section 3, of the By-Laws

It was voted, however, to refer the matter to the Judicial Council

It was further voted that in its judgment, all matters pertaining to the transfer of membership should be referred to the Judicial Council

The committee recommends that Chapter V, Section 5, of the By-Laws be amended by striking out the words "Or the General Manager," and substituting the word "or" between the words "Delegates" and "the," so that the section shall read "And shall perform such other duties as may be directed by the House of Delegates, or the Board of Trustees"

The Committee on Registration of Delegates presented, through its chairman Dr D Chester Brown, the following amendment to the rules for the guidance of the Committee on Credentials

To be substituted for Paragraph 1 of the rules adopted June 6, 1912

Credentials shall be of two parts The first part shall be sent to the office of the secretary of the American Medical Association by the secretary of the constituent association, "not later than seven days prior to the first day of the first meeting of the House of Delegates" and shall be a list of delegates "and alternates," for that Association

The committee recommends the adoption of this rule

The following amendment to the By-Laws was submitted to the House of Delegates at the meeting of June 5

Amend by adding to Chapter XI, Section 1, the following words "16 Miscellaneous Topics"

Amend Chapter VII, Section 7, by adding the words "The Council on Scientific Assembly is authorized to appoint officers for the meetings making up the section on miscellaneous topics"

The committee recommends the adoption of this amendment

The Committee on Amendments to the Constitution and By-Laws submitted the following amendment, Chapter VII, Section 11, of the By-Laws

Amend by adding the words "(9) A Committee on Sections and Section Work, to which shall be referred all matters relating to the sections and the section work Members of the Council on Scientific Assembly shall be members *ex officio* of this committee"

The Committee on Amendments to the Constitution and By-Laws submitted the following amendment to Article 9, Section 1, of the constitution

Amend by striking out the words "Chairman and Vice Chairman of the House of Delegates," and substituting the words "Speaker and Vice Speaker of the House of Delegates"

The reference committee has received from Dr Oscar Dowling the following memorandum

Add Principles of Medical Ethics

Chapter I, Section IV—Judicial Council—Authority For complaints or violations of

Chapter II, Article I, Section 6—The Judicial Council shall have original jurisdiction

Chapter II, Section 6, add last line following manufacture, or represent or exploit or promote (for financial gain or other purpose) their use in any way

This memorandum having been received too late to be acted on by the committee, the chairman moved that it be referred to the Judicial Council for consideration and report

On several motions, which were duly seconded and carried, the several sections of the report were adopted

Dr George A Moleen, Colorado, moved the adoption of the report as a whole

Seconded and carried

Dr Floyd M Crandall, New York, presented the following resolution, which was duly seconded and carried

Resolved that the secretary be empowered to arrange and renumber paragraphs of the Constitution and By Laws as may be necessary to bring them into harmony with existing sections.

The chair announced the following committee called for by the action of the House in response to the remarks made by Dr Billings

Dr Charles H Mayo, Minnesota, Dr William H Welch, Maryland, Dr Victor C Vaughan, Michigan, Dr Samuel Lambert, New York, and Dr Frank Billings, Illinois

Report of Reference Committee on Reports of Officers

Dr Horace G Wetherill, Colorado, chairman, presented the report of the Reference Committee on Reports of Officers

Your Committee on Reports of Officers desires to submit the following

On further consideration of the matter held in abeyance in our previous report, relating to the formation of special journals in ophthalmology and otolaryngology, we commend the plan of the Board of Trustees for the formation of journals of ophthalmology and otolaryngology, but believe it should be carried out with the full cooperation of the members of the American Medical Association who are most interested in their success The prevailing opinion appears definitely to favor the creation of separate journals We would leave to the Board of Trustees the arrangement of the necessary details with the sections and specialties involved

Regarding the resolution of Dr Arthur T McCormack of Kentucky which is as follows

Whereas, The United States is at war with Germany, a war which involves the freedom and lives of our people, and the existence and honor of our nation be it

Resolved By the American Medical Association, the representative organization of the 145,000 physicians of America, that the president and the Congress and the supreme court of the United States, and the governors and legislatures and the supreme courts of the states and territories, respectively, be memorialized as follows

1 The medical profession of America pledges itself to furnish adequate, competent officers for the efficient care and protection of the health and lives of our forces at home, on the seas or overseas that it realizes, and will help to its utmost in solving, the necessity for the conservation of our food supplies, for the mobilization and protection of labor in home, factories and mines and on farms and our great transportation routes and for such sacrifices to the common welfare in loans of money to or in increased burdens of taxation by the federal government as may be demanded for the proper exercise of its duties to civilization

2 That all of these increased burdens demand for their success such conservation and care, above all other considerations, of our man power as to make available for the efficient service of the nation whatever each man and woman can best be trained to do and that such efficiency as the world has a right to expect of the United States cannot be realized until prompt and effective steps have been taken to educate our people in the control and prevention of those diseases which science has demonstrated to be preventable, with a view to the elimination of the waste from unnecessary illness, lingering inefficiency and premature death

3 That those in authority, and having the right and opportunity of making constraining and enforcing law, be urged to a realization to the paramount importance of the conservation of the human force of the individuals composing the nation, as distinguished from the material resources and mechanical devices which are of tremendous importance in this struggle only so long as adequately and effectively manned, by healthy and therefore productive men and women, with a view to the establishment of health departments clothed with the necessary authority, and provided with ample funds, to actually help all the people whether crowded in the slums or on the avenues of the cities or scattered on the high roads or by paths of the country, to prevent

unnecessary disease and death and realizing that in the present emergency that they be urged forthwith to construct and coordinate a national department of health from existing bureaus having health functions making our United States Public Health Service, with its proud traditions and record of great achievement, the executive arm with its Surgeon General the head of the department joining with it the bureaus of Vital Statistics and Chemistry and the Children's Bureau with their present personnel and duties and creating such bureaus and activities as may effectively study and demonstrate the best methods in urban and rural sanitation, in home and public building ventilation in housing in public health nursing, in all of the multiple complex health problems of our nation a proper solution of which will give it the power to settle right the great world problems as it knows best how to settle.

4 That supporting the constitution we understand that the police power under which all health authority is constituted is reserved to the states and that such a national department of health would and should be but a strategic board planning and demonstrating campaigns against existing or threatening diseases which produce suffering inefficiency or death It is urged that the states respectively, provide for their health department such men and money as may be necessary for them to effectively reach and help all the people wherein endemic disease exists or epidemic disease threatens, and to establish and equip such county or district health department with an all time executive and such nursing and other aids as their varying needs may make necessary all under civil service their tenure of office being determined not in terms of years, but by economic administration and progressive decrease in disease and death rate and increase in efficiency of the citizens of each jurisdiction

5 That we proudly recall to the country that we shall send our best trained and most proficient physicians, surgeons and nurses to the most dangerous and deadly duty at the front The first aid to the wounded boys that represent America there and we confidently urge on the conscience of the American people not only a proper solution of these—the paramount problems of this struggle but the adequate protection of our women and children of our country during and after our absence from the maladministration of quacks and charlatans faddists and sectarians nostrum vendors and patent medicine fakirs who have been loudest to acclaim their meticulous merits in times of peace and prosperity and will be found as conspicuous by their utter uselessness and worthlessness in the emergency of war

Your committee would request that the House of Delegates take up Dr McCormack's resolution specifically for action As suggested in our previous report the present status of this resolution is that of lying on the table We desire to call it up for consideration Under Chapter XIII of the By-Laws this action seems necessary to have the report become effective It says

No memorial resolution or opinion of any character whatever shall be issued in the name of the American Medical Association unless it has been approved by the House of Delegates.

Your committee has further reconsidered the method of presenting this report to the proper government authorities and desires to recommend that if adopted by the House of Delegates it go through the regularly constituted officers of the House of Delegates to the government officials

On separate motions duly seconded and carried, the sections of the report were adopted

Dr Arthur T McCormack Kentucky moved that the memorial presented at the first meeting of the House of Delegates be approved by the House of Delegates Seconded

After discussion by Drs H G Wetherill, Arthur T McCormack Southgate Leigh and M L Graves Dr C E Cantrell Texas moved as a substitute motion that the memorial be referred with power to the special committee appointed to act in the matter presented by Dr Frank Billings, Chicago

Seconded and carried

Dr S G Kahn, Utah moved to reconsider the action taken by the House at a previous meeting in assigning the number of units to the sections

Seconded and carried

Dr S G Kahn Utah then moved that the Section on Diseases of Children be given the same number of units that it previously had Seconded

After discussion by Drs C H Good, Stewart R. Roberts, George A. Moleen L R DeBuys Alexander Lambert, Abraham Jacobi E Eliot Harris and H M McClanahan on motion of Dr C. Eliot Harris which was duly seconded and carried the privileges of the floor were granted to Dr Isaac A. Abt, Illinois, to speak on the subject.

After discussion by Dr Abt and Dr C E Cantrell, Dr Arthur T McCormack moved, as a substitute motion, that that section of the report of the Reference Committee on Reports of Officers now under consideration be amended so as to assign to each of the sections of the Scientific Assembly six units

The substitute motion was seconded and carried unanimously

The secretary presented the following resolution from the Section on Pharmacology and Therapeutics

The Section on Pharmacology and Therapeutics instructs its delegate to the House of Delegates to present the following

That this section favors the organization of pharmacists in the army on a basis analogous to that of dentists, insuring them a definite status in the army

On motion of Dr Arthur T McCormack Kentucky, which was duly seconded and carried the resolution was referred to the special committee of which Dr C H Mayo is chairman

Seconded and carried

The secretary read a communication from the Section on Stomatology in which the section advised the House of Delegates that the following resolution had been adopted by the section defining the qualifications of applicants for Associate Fellowship in the Association which the section proposed to require before endorsing applicants, and asked the approval of the House of Delegates of this action of the section The resolution is as follows

Resolved That applicants for Associate Fellowship holding the degree of D D S or its equivalent and members of their local county or state dental organizations before their application is approved by the section must be considered by the executive committee of the section and must be endorsed by at least two members of this executive committee as having attained to a position in the dental profession either by virtue of original research work or through some meritorious service rendered to the profession or public which in the judgment of the executive committee of the section, warrants favorable action on the applications

The House of Delegates approved this action of the Section on Stomatology

On motion duly seconded and carried, the House of Delegates adjourned *sine die*

THE REGISTRATION AT NEW YORK

The total registration at the New York Session was 5 047 Below are given two summaries one by sections and one by states

REGISTRATION BY SECTIONS

Practice of Medicine	1 259
Surgery General and Abdominal	973
Obstetrics Gynecology and Abdominal Surgery	365
Ophthalmology	401
Laryngology, Otology and Rhinology	352
Diseases of Children	166
Pharmacology and Therapeutics	36
Pathology and Physiology	83
Stomatology	47
Nervous and Mental Diseases	219
Dermatology	122
Preventive Medicine and Public Health	203
Genito Urinary Diseases	133
Orthopedic Surgery	105
Proctology and Gastro Enterology	136
Registrations without specifying any one section	348

REGISTRATION BY STATES

Alabama	14	Nevada	3
Arizona	1	New Hampshire	19
Arkansas	10	New Jersey	321
California	58	New Mexico	4
Colorado	37	New York	2 062
Connecticut	186	North Carolina	47
Delaware	10	North Dakota	7
District of Columbia	58	Ohio	202
Florida	11	Oklahoma	14
Georgia	36	Oregon	15
Idaho	2	Pennsylvania	552
Illinois	137	Rhode Island	50
Indiana	84	South Carolina	29
Iowa	47	South Dakota	10
Kansas	25	Tennessee	37
Kentucky	30	Texas	48
Louisiana	19	Utah	5
Maine	29	Vermont	25
Maryland	80	Virginia	51
Massachusetts	233	Washington	9
Michigan	93	West Virginia	36
Minnesota	71	Wisconsin	38
Mississippi	4	Wyoming	2
Missouri	60	Guest	199
Montana	7		
Nebraska	20		
			5 147

THE PATRIOTIC MEETING

A patriotic meeting was held at the Hippodrome, New York City, June 7, 1917

The Hippodrome, which has a seating capacity of about 6,000, was filled to its utmost capacity

Previous to the speech making, Sousa's band rendered a "Southern Rhapsody" and "Sheridan's Ride" Mademoiselle Frances Alda, costumed in flags typical of each country, sang, "Rule Britannia," "La Marseillaise," and the "Star-Spangled Banner," accompanied by Sousa's band and the Metropolitan Opera Chorus

Dr Alexander Lambert, president of the Medical Society of the State of New York, called the meeting to order at 8 45 p m

After stating that this meeting was held "to express our loyalty to our country and to show our patriotism," he introduced as the first speaker of the evening, Hon John Purroy Mitchel, Mayor of New York City, who said

Address by Hon John Purroy Mitchel

Mr President Ladies and Gentlemen of the American Medical Association It is a grateful privilege to be permitted to come here, representing the city of New York, and to say to the members of this great Association that New York extends a most cordial and hearty welcome New York is glad to receive you within her hospitable gates and to assure you of her appreciation of your services rendered to mankind This Association, the greatest of any representing the medical profession, numbering, I am told, over 80,000, comes here to hold its annual convention, and this meeting tonight is to consider means whereby this Association and the physicians and surgeons of the United States may serve our common country in this great crisis that now confronts us (Applause)

This Association has already rendered signal and distinguished services to the country and to the profession that it represents This profession, the highest of the civil lay professions, has already through the ages given ample evidence of unlimited service to mankind of which it is capable, and now, when the United States finds that all the resources of our country, physical, financial and human, are demanded for service in this great world struggle, the physicians and surgeons of the United States have given the same response to that cause that they have always given at every time of a national crisis in this country (Applause)

One of the splendid and inspiring things which we see, as a result of this war, is the sacrificial spirit in which the men and women of the United States have responded to the nation's call Germany said to the world that there was doubt as to America's real spirit in this matter, that there was doubt as to the patriotism of the people of the United States My friends, I wish to say to you that the nation's call for funds with which to conduct this war is one answer to that challenge, and the other is the splendid response of the young manhood of America made two days ago in answer to the call for registration (Applause) There is no doubt about the patriotism of the people of the United States All it asks is organization, direction, opportunity to serve, and the service will be there

We are going into this great struggle for democracy, for the direction of popular self-government and the ideals for which America stands in the world All the resources of our country will be devoted to it, and I know that if I had the authority I could speak with certainty that every member not only of this Association but of the profession which it represents in the United States is ever ready to render the service which may be required of you, and that service will be rendered to the fullest extent under whatever circumstances it may be asked (Loud applause)

Dr Lambert then introduced Hon Dudley Field Malone, who said, in part

Address by Hon Dudley Field Malone

New York is not only proud of the circumstances under which you are here, but proud of the fact that we have had a short respite before more harrowing times in which it might not be possible for you to get here

You have been called together and summoned to a patriotic meeting to ask men to voice their sentiments and your sentiments with regard to the state of the nation and the duty of its citizenship There is no man who does not feel his entire inadequacy to represent the collective scientific men and the American patriotism of the physicians and surgeons of the United States, and so I feel a little embarrassed And yet there is a duty that stretches clear before every man and every woman in America, and the first duty is, it seems to me, that America shall not underestimate the power or the resources of the common enemy At the beginning of the European war, Germany controlled a population of 70,000,000 people, and today she dominates 176,000,000 people of whom 82 000,000 are in abject slavery Those are the circumstances and the pan-Germanic power which we together with our allies face as an enemy of world liberty and world democracy And, my fellow citizens, it will not be sufficient that this vast army of 10,000,000 men, marshaled through our patriotism and a quick response of the young manhood of the nation, be mobilized and trained and made skilful for the contest and adequate to represent America and the allied cause, but there are other things to be done, not abroad, but at home in order to make certain the victory for ourselves against the common enemy We cannot be of assistance to heroic England, to poverty-stricken France, to worried Italy, and to uncertain Russia unless we as a people put industry, energy and enthusiasm behind the cause of the government and the purposes of America in this war While we have no quarrel with the German people, while we have a supreme contempt for German autocracy, if the aims of German autocracy are to be backed up by a united German people, then the whole resources of the United States will be devoted to fighting not only the the kaiser but the German people as well (Applause)

America can be of no aid to the allies and cannot win this war unless America can rely on the enthusiastic aid, the advice and untiring efforts of the American women We cannot win this war by the amount of our arms, and it is almost axiomatic to say that a nation to succeed in a warfare like this must be both efficient and just To be efficient she must mobilize her resources, she must centralize her resources by direct authority, she must marshal men of large business experience to control trade and commerce needed for the purposes of war We must think clearly and think ahead, and we must profit by the untoward experiences of England and France This is an emergency the like of which nations have not faced before With our hopes, with our national and international aspirations and determinations, let us realize that the emblem of our country must not mean an empty symbol, that the stripes of red mean not the stripes of license and unrestricted speech and anarchy, that these stripes of red are stripes of blood—the blood of millions of men who have been willing to die for the institutions that we intend shall prevail in the world (Applause) These stripes of white are not the anemia of cowardice which quails before man's duty under these great circumstances, these stripes of white are the stripes of pure motive and parchment on which institutions and the character of the institutions of our nation are written, and the blue means the loyal firmament into which all our states have been swung as principalities in a common union, so that today we are a united people, holding up our heads, standing forth in battle array, taking up arms with industrial fervor to help England and France and Italy and Russia and other nations, not only that German autocracy shall be destroyed, but that the basis of permanent world peace may be secured (Loud applause)

Dr George E Vincent, president of the Rockefeller Foundation, was introduced and said, in part

Address by Dr George E Vincent

Members of the American Medical Association In your collective capacity, you take pride in what you have done for medical education and for the standards of your profession As individuals you become satisfied with your successful careers You feel a thrill of enthusiasm when you think of what your profession stands for When you remember the great traditions of knowledge skill and professional loyalty, you can point with pride to the members of your profession You can point with pride to what members of your profession have done in foreign lands They have rendered service which has won the admiration of mankind You feel a glorious thrill of belonging to the medical profession But now, you yourselves, in your individual capacity, and as an organization, are face to face with a real situation, and you in the undercurrent of your thought in the background of your minds are asking yourselves the question, what can we do to show our loyalty to the profession and to the nation? Your skill your investigation your technic and cleverness are a great national asset but the question which your fellow citizens are putting to you now is, what are you going to do in this great hour of the nation's need? And you have no doubt what that answer is going to be You know what your loyalties are and you are ready to show that the glories of your profession will find concrete expression in service in the field and in the hospital Already members of your profession are in France still others are on the sea, and there are hundreds of medical men here today who are ready to go when the call comes The success of your service to the country will depend not on your skill or technic but on the ideals of your country which you stedfastly hold in mind and become a real inspiration to your deeds We are all facing a problem which so stirs the heart and so firmly fixes the will, that as a united people we shall go steadily on to victory (Applause) After all, it is the soul of a people that counts, it is not the resources it is not technic, it is not all the material things that make a nation No It is the soul of a nation it is the thoughts of its citizens, the impulses which stir their hearts (Applause)

It is a precarious thing a somewhat pathetic thing now to be a Russian but I feel that Russia is not going to desert the allies but is going to find unity is going to find stability is going to feel the support of our friendship and as we rally to her support Russia is going to find herself groping toward the light and ultimately before this war is over achieving a new unity and feeling that she is a new Russia which represents the dawn of democracy as one of the great nations of the world (Applause)

Let us remember heroic Belgium and recall the fact that patriotism is not a question of square miles but is a question of quality of citizenship loyalty to common ideals and devotion to a common cause

After referring to opportunity and the rendering of service, Dr Vincent said

Men and women of the medical profession I congratulate you on what you have to offer to the nation I congratulate you on the great opportunity you have to organize yourselves for the useful purposes of this great nation and that you have resolved that your skill and your knowledge and your courage and your devotion shall be put at the service of your country not with the thought of sacrifice but in order that you in your own lives may fulfil this mighty purpose Be strong in order that we may help the weak Be just in order that we may defend the right Be magnanimous Be disinterested in order to rebuke aggression and fight hard—fight the enemy with all our resources—fight until we win victory for peace and for the welfare and harmony and brotherhood of all mankind (Loud applause)

Address by Col Theodore Roosevelt

When Col Theodore Roosevelt was introduced the audience arose and gave him an enthusiastic ovation which lasted two or three minutes When quiet was restored, Mr Roosevelt said in part

I feel that the time has passed in this country for rhetoric or for conversation (Laughter and applause) The time has come when as a people we are to decide for ourselves whether hereafter we are to rank with the nations that do the things or with the nations that talk about those who do them (Applause)

Mr Roosevelt then spoke at length on the question of service of rights and privileges saying that they go hand in hand with responsibility In referring to the medical profession, he said

Now friends when I speak to you doctors of service I speak to members of a profession which is honorably distinguished, I am tempted to say honorably distinguished above all other lay professions by the emphasis which they put on service over and above the reward for service I do not mean for a moment that the doctor or anyone else should be indifferent to the reward I do not like tom fools I expect a doctor who is worthy of his salt as I expect every man else from necessity, to have a reward given him for his service He owes it to himself, his wife and his children He owes it to the community If he cannot pull his own weight he cannot hope to pull anyone else s

All I ask of the people of this country is that in the service of citizenship they shall apply the same rules that you men of the medical profession have applied as part of the ethics of your profession In this crisis, I want you all to think not of the sacrifices you will have to make but of the glorious opportunity that is yours to render service If you are fit for citizenship you will make sacrifices whatever they may be It is not so much you will deserve any extraordinary credit but if you do not make sacrifices if you do not render the service then you are an abject creature who should be hunted out of the society of self-respecting men and women I want to make the man who does not render service feel the force of that statement What we need to hold ever before our eyes is not the incidental sacrifice but the high honor and privilege of being permitted to render the service Every young man of the right type will eagerly long for a chance to render such service and will count himself thrice fortunate if he once secures a chance to render it no matter what price in life or limb he may pay for it (Applause)

If we go home from this great meeting and let our patriotism evaporate in cheering and waving of flags and listening to stirring tunes and then say we hope the allies will win we will have shown ourselves not to be the sons of the men who wore the blue or the gray in the Civil War, and unfit to claim spiritual heirship with the men of '76 who fought under Washington (Applause)

What I have said about service is especially applicable to the young doctors Surgeons are sorely needed for our allies and for ourselves We can hardly form any conception of the sufferings among the people of Belgium Russia Serbia and Roumania We have got to help our allies Let us remember that England today has hardly more than one medical officer for every thousand men and that in civil life there are in England towns of 15 000 and 20 000 people where there are only two or three elderly doctors left to take care of all of them The United States needs for this war 40 000 medical practitioners and she has got about 5 000 We have got just about one eighth of the number we need If we do not get those men you will see our young recruits die like sheep in the camps where they concentrate not through their fault but because proper care has not been provided for them Remember these practitioners should be young men under 35 and they should be taken so as not to disrupt the medical schools and teaching hospitals I want to say to you people here who are not doctors that your sons, your kinsfolk will be going to these camps and if you do not provide proper care for them they will die in these camps And remember this You cannot have them cared for if you do not give the surgeon general power commensurate with responsibility (Applause) We are in war and we have got to see to it that one man shall not through carelessness jeopardize the lives of his associates

See what we did in building the Panama Canal Panama had been a byword for lack of health We could not have built that great canal if we had permitted unhygienic conditions to be perpetuated We were able to build it because we took a trained medical man gave him the power to take care of the health of the people on the isthmus a power commensurate with his responsibility and then sat back and saw him exercise that power well That man is now surgeon-general of the army of the United States—Dr William C Gorgas (Applause) Give Gorgas and those associated with him the power commensurate with the responsibility of the tasks which they are to perform make them absolute in their control over the health of the camps and so far as necessary over the health conditions surrounding the camps and then hold them to a rigid accountability for the exercise of that power and they will do things (Applause)

After referring to registration day and the large number of young men that registered Mr Roosevelt closed by saying

We are in this giant war both for the sake of our national interest and for the sake of civilization and humanity throughout the world For two years before we finally and reluctantly went to war Germany had been engaged in a steady and reckless campaign of murder against American women and children and unarmed men Germany had struck blows at international right and justice, and unless Germany is signally punished for what she has done, the whole movement for international fair dealing and brotherhood will have been put back for centuries To the conquered countries she has behaved with a systematic and appalling brutality which is literally unparalleled among civilized nations since the close of the hideous religious wars of the seventeenth century

I wish every American could read the book just published by Arthur Gleason, entitled, "Our Part in the Great War" One is appalled at the horror and the fearful cruelties he recounts, and no American who reads it can feel anything but shame if we do not instantly take effective action to rebuke those cruelties and defend ourselves No American who reads it, if he has a spark of manhood and the American spirit in his soul, can fail to feel his heart hardened with the resolute purpose to fight for the right, and that it is his privilege to do his part in seeing that this nation goes steadfastly on in this war until its efforts and those of the allies are crowned with complete and overwhelming victory, and let every man within the hearing of my voice feel as much as every man throughout this nation feels, that his children ought to turn from him in shame unless he does his duty, unless he does all that within him lies, to bring victory which will make the American flag once more the flag of the brave and the free, the flag of civilization, of humanity, the flag of freedom, and of protest against wrong doing to all the nations of mankind (Loud and prolonged applause)

At the conclusion of the speech-making, Sousa's band rendered "The Invincible Eagle" and the soul stirring march "Hands Across the Sea"

THE SCIENTIFIC ASSEMBLY

THE OPENING GENERAL MEETING

Tuesday Evening, June 5

The opening meeting of the Association was held in the Grand Ball Room of the Hotel Waldorf-Astoria, and was called to order at 8 30 p m by the President, Dr Rupert Blue, Washington, D C

Bishop Charles Sumner Burch delivered the invocation

Address of Welcome

Dr Wendell C Phillips, chairman of the Committee on Arrangements, was introduced and said

Mr President, Ladies and Gentlemen, Guests, and the Profession of the Empire State It falls on me, as chairman of the Committee on Arrangements, to have the honor of welcoming you to the metropolis of our country for your annual conclave

It is now thirty-eight years since the American Medical Association met in the city of New York, and just before I came here I glanced over the President's address, delivered on that occasion by the late Lewis H Sayre, who was the President of the American Medical Association at that time, and I learn that the entire membership of the Association thirty-eight years ago was about 6,150, and I believe the membership today is approximately 70,000, so that we now have at our annual conclave sometimes as many present as the entire membership at that time

It is a great pleasure to have you come to New York at this time and enjoy some of the beautiful balmy weather of this famous summer resort We all know how you have been suffering with cold and rains in other parts of the country, and we now welcome you to the sunshine of this metropolis You have not had a chance to get warm since the first of last November I need not tell you that our weather is exactly like what you have had in the last few days People sometimes talk about the heat of New York We do not know what it is here The weather is always sunshiny in New York

During the past few days you have had an opportunity to observe some of the medical and surgical activities of this city as you find arranged in the clinical sessions of the program, which has been gotten up for your benefit and pleasure, and the Committee on Arrangements certainly hopes that you will enjoy some of these privileges

Before I go further, I must make an excuse for the absence of the mayor of our city There is a slip on the part of the printer and some neglect on the part of the chairman of the Committee on Arrangements to have had the name of the mayor down for an address of welcome, because he wrote me that it would be impossible for him to be present on this occasion Mayor Mitchell is a scrupulous man who always keeps his engagements, and he felt very much annoyed when his name was on the program However, he expects to be with us on Thursday night and will deliver an address on that occasion, when our meeting, our patriotic meeting, will be held in the Hippodrome We hope you will all arrange to be present on that occasion

When the war came, it seemed to the Committee on Arrangements and the Entertainment Committee that it would be in better taste if we were to arrange for a patriotic meeting rather than the usual social entertainment in the form of a reception to the President, and through the kind offer of his friends and our friend, Dr Alexander Lambert, Col Theodore Roosevelt has consented to talk at the meeting on Thursday night We shall also have Dr George E Vincent speak to us on that occasion and Madame Alda will sing in costume the national anthems of the three principal allies We think it is going to be quite a night, and we hope you will all enjoy it Tickets for admission to the Hippodrome may be obtained at the headquarters at the Hotel Astor

I am not going to take too much time, but I have one more thing to say in connection with the medical profession of this great city In other parts of the country, notably in Johns Hopkins and elsewhere, we have heard a great deal said about the "dead line" We have no dead line in the medical profession in New York Men are as good at a hundred years as they are when they are younger as far as we can see, and we have two or three notable instances at this time I have a letter in my pocket which was written by Dr Thomas Addis Emmet, now in his ninetieth year, in which he says he regrets it is not possible for him to be present with us, but that he is with us in spirit tonight (Applause)

Some of you who graduated many years ago will remember one of the teachers in one of your colleges, a man now in his ninety-fifth year, still an active member of our State Board of Charities and I believe he is beginning to write a very important volume of reminiscences He is as hearty and active and as young in spirit as ever I have no doubt that a great many of you thought he was dead a good many years ago I have the very great pleasure in having you see that we have no dead line [Here the speaker introduced Dr Stephen Smith, now in his ninety-fifth year The audience rose and gave Dr Smith an enthusiastic ovation] I think you will admit we are quite lively here in New York We have another perennial member of the profession, one who has many more birthdays than any other man in America—Dr Abraham Jacobi (Applause) [The audience rose and gave Dr Jacobi an ovation similar to that given to Dr Smith]

Lastly, I bid you welcome to our city, welcome to our hospitals, welcome to our social festivities, and may you go away from New York thinking more of it than you did when you came (Applause)

President Blue then introduced Dr Alexander Lambert, President of the Medical Society of the State of New York, who delivered the following address

ADDRESS OF WELCOME BY THE PRESIDENT OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

Mr President, Members of the American Medical Association, Ladies and Gentlemen It is with keen pleasure that the medical profession of New York welcomes the American Medical Association It is more than a generation now since New York has had this pleasure and this honor The generation of medical men that welcomed this society then have in a great part laid down their work and ceased from their labors, and with the exception of our few beloved friends here at our side, the activities of the work have devolved on what was to them the younger generation The development of this country has grown in that time so that you of the western slope, you of the Northwest and Middle West look on us here as the effete East A great nation has grown up and developed in this country since that time—a generation ago—and of that great nation New York has become the heart From it the arteries run to its uttermost parts From it the life-giving capital pours forth and is sent out in recurrent streams to build up and make possible the steady growth and wide development of the nation Through it, in all the years, has been sent out new blood from many lands to help develop and build up its vast territories and back to it have come in returning veins the products from all the land that must be sent forth in the commerce with all the world

It is peculiarly fitting that the American Medical Association should return to New York at intervals because the American Medical Association was first conceived in the mind of a young and vigorous New York physician N S Davis when in 1844, at the annual meeting of the Medical Society of the State of New York in Albany Dr Davis a delegate from the Broome County Medical Society proposed a series of resolutions declaring in favor of the adoption of a fair standard of general education for students before commencing the study of medicine of lengthening the annual courses of medical college instruction to at least six months and the grading of the curriculum of studies and have all examinations for license to practice medicine conducted by state boards independent of the colleges

As a result of the agitation then brought about there assembled May 1 1846, in the hall of the medical department of New York University about 100 delegates representing medical societies and institutions of sixteen of the twenty-six states of the Union Again through the motion of Dr Davis committees were formed to report on the four following propositions at a convention to be held in Philadelphia in May 1847

> First that it is expedient for the medical profession of the United States to institute a national medical society
>
> Second that it is desirable that a uniform and elevated standard of requirements for the degree of M D should be adopted by all the medical schools of the United States
>
> Third that it is desirable that all young men before being received as students of medicine should have acquired a suitable preliminary education
>
> Fourth that it is desirable that the medical profession of the United States should be governed by the same code of medical ethics

When May 1847 came around there assembled in Philadelphia representatives from twenty-eight medical schools and forty medical societies being the organized medical institutions of twenty-two of the twenty six states of the Union After full discussion the four propositions were adopted and a complete constitution by laws and code of ethics were also adopted This of course was not done without opposition and it must be confessed that the main opposition came, as one might expect from New York and Boston for these centers have always shown an individualistic rather than a collective tendency In Baltimore finally in 1848 the first regular meeting of the American Medical Association took place and it has since regularly met in annual convention with the exception of the early years of the great Civil War in this country

The preface of the original constitution of the American Medical Association declared that the purposes of this Association were for cultivating and advancing medical knowledge for elevating the standard of medical education for promoting the usefulness honor and interests of the medical profession, for enlightening and directing public opinion in the duties and requirements of medical men for exciting and encouraging emulation and concert of action in the profession and for facilitating and fostering friendly intercourse between those engaged in it.

It is interesting that after the Association has reached the three score years and ten of its existence it stands for the same purposes for which it was originally founded It is today the controlling force and the active power toward the continual development and improvement in medical education Through its Council on Medical Education it has raised and it has set the standards of medical education in this country It has been true in its endeavor to improve its own profession, and has been true to the principles on which its existence was based

It is another strange coincidence as Dr Phillips has already mentioned that thirty-six years ago, in this city the President of the American Medical Association at that time, Dr Lewis Sayre of New York, proposed that the responsibility of disseminating medical knowledge throughout the country should not be confined to the transactions of this society but should be performed by means of a medical journal Again a great idea affecting the American Medical Association sprang from the brain of a busy New York physician and the best and most active medical journal of the world today has been the result It needed the vigorous and growing West to develop that journal and this was done through the youthful vigor and through the devotion of Dr Simmons, and the profession today honors him for the work he has done and for the monument he has raised which truly is to him—and will be in the future—a monument more lasting than brass Again can we confidently say that the American Medical Association has fulfilled and developed the best means of disseminating medical knowledge throughout the wide extent of this country

Another object for which the American Medical Association was founded was to disseminate a code of ethics or a standard under which the members of its great profession could act in their intercourse with each other and with the world That code like all moral abstract ideas has been the cause in the society and in the profession of many bitter differences of opinion But it is gratifying to realize today that in the medical profession at least there is a frank willingness to acknowledge that however opinions of details may differ there is a full realization and acknowledgment that with the rights given to the profession by the state there go certain duties which must be lived up to and the force of the public opinion within the profession is a stern monitor which insists that the duties and rights must go hand in hand and that the responsibility of these must be accepted

It was in New York that the main division and bitter split on the code of ethics came and it is with a keen pleasure that the profession of the state of New York and of the county of New York can welcome the American Medical Association with all the old quarrels forgotten and all the injuries therefrom healed so that you are welcomed tonight by a united and harmonious profession

Since the last meeting in New York the growth of the Association has been such that the state of New York alone contains in its membership of the state society many more members than were contained in the national society at that time and as a matter of fact at the semicentennial celebration in 1897 it was proudly stated that the American Medical Association contained nearly 9 000 members Today the Medical Society of the State of New York contains nearly that number and the American Medical Association contains close on 80 000 This is but little realized either by the profession or by the public at large and in welcoming you tonight it seems worth while to remind you how many things there are about the American Medical Association to which when you are assembled in convention as you are tonight you may point with pride and how few things there really are regarding the American Medical Association that you have to view with alarm

New York has shown you in the last two days its enormous practical advantages as a medical center the great wealth of clinical material on which its medical schools found their knowledge and with which the medical students are instructed We have endeavored to present to you the foundation on which the scientific knowledge of medicine is built—that is the clinical study at the bedside of the various manifestations of the morbid processes that we know as disease—and to show also the many modern ways of dealing with the various medical and surgical situations that may arise We have also endeavored to bring together for your information and study all the allied subjects which touch the medical profession We have endeavored to show you the practical application of nursing throughout this city We have endeavored to show you the working of the enormous health department and the mechanism by which the health of the city is protected and through which the sanitation of the city is performed to show you also how all this can be used for educational value to instruct and teach the public how it is protected and how through that knowledge they may protect themselves We have further endeavored to bring to your notice and for your information and instruction how the many problems of the building and maintenance of hospitals may best be solved We have gone further and we have shown a new development hardly yet a decade old—we have endeavored to show you the means by which the human side of the hospital must in the future develop and how hospitals must and, in fact are at present broadening their influence and their care over the patients that come to their wards Hospital social service has humanized the hospitals of this city as nothing else has done and has humanized the hospitals in this country in the many cities in which it has been undertaken and so well developed, for this idea starting in Boston, has spread throughout the country Hospital social service has developed that side of medicine which deals with the environment of the patient in its relation to sickness and injury and it deals with the strain of that environment in the life of the patient Through its influence and through the ideas developed therefrom we have come to realize that while the hospital is a place for the care of the sick and the injured it is also a place from which physicians are ready to gaze humanely out on humankind It has enormously broadened the outlook of medicine, it has developed enormously the possibilities of surgery, for it has broadened the outlook of medicine by extending the influence of hospital care out through the complete convalescence and also greatly prevented the recurrence of disease in its patients through the regulation of their lives and environment It has extended the usefulness of surgery in that it has given the opportunity of follow-up work to show the surgeon the results he has been able to obtain in restoring his injured patient to usefulness and economic value and efficiency

We have, in this session in New York, brought together for the first time, for your study and consideration, all the associated interests that are indispensable to the development of medicine in its relation to the patients and to the hospitals through which so much work of the medical profession must be done

New York welcomes you to her hospitality She welcomes you to all she has to give for the pleasure and entertainment of mankind, and her reputation on that score is not small We realize that such opportunities here are so widespread and so many that in playing the host to you we know you prefer to be left alone to your own devices in this regard, and we have thought the broadest hospitality was to accede to your wishes in this matter

We appreciate that as we welcome you we are standing under a shadow so broad and so deep that it is not fully realized by the majority of the people We cannot clearly foresee the future We cannot foretell what demands this war may bring on this Association A goodly number of its members have already gone to give their aid as best they can to those who need it Many, many more must follow and will follow In this war the medical corps has suffered proportionately the greatest losses, but where danger lies there lie honor and distinction also What will be the results of this war on the meetings of this Association we must let the future decide In the present we heartily welcome you to this meeting of the American Medical Association in New York, and we offer you New York's heartiest welcome and her hospitality in fullest abundance

Dr Walter P James, President of the New York Academy of Medicine, was introduced and said

ADDRESS OF WELCOME BY THE PRESIDENT OF THE NEW YORK ACADEMY OF MEDICINE

Mr President, Ladies and Gentlemen Dr Lambert has just given you a warm welcome on the part of the medical profession of New York State, and I am expected to say a word of welcome for the medical profession of this city on behalf of the New York Academy of Medicine After all, New York City is just one part of the state After the welcome by Dr Lambert, I cannot help thinking of the farmer who cut a large hole in his barn door for the dog and a small one for the cat (laughter), but this gathering tonight is worthy of a very hearty welcome, for the American Medical Association, above and beyond most gatherings that I know of represents team play on the part of a great profession President Wilson has said that this war would be won only by team play, and we are convinced of the truth of his remark Team play is what distinguishes man from the lower animals Team play carried to a higher point is what distinguishes the higher groups of mankind from the lower, and, after all, that makes us civilized when we come to the final analysis What makes us able to conquer is our forces arranged as team play The value and importance of team play have been discovered by our profession I know of no other profession that has been able to get together gatherings of this sort with one idea, each working with the other in the most perfect kind of team play

I was impressed with this feature of our own profession one night during the past winter when, at a meeting of the New York Academy of Medicine, I happened to see in the audience a man who did not belong there, although I was glad to see him He was a lawyer who is president of one of the largest and most important trust companies in this city After the meeting I spoke to him and he said to me, "This must be a very unusual gathering, is it not?" "Not at all," I said, "It is a gathering of doctors such as is seen in other large cities all over the country In the large cities there are larger gatherings, and in the smaller cities there are smaller gatherings, doing the same thing" "Well," said the lawyer, "all I can say is that I congratulate the medical profession, for I know of no other profession that could hold such a meeting as I have seen tonight" 'What do you mean?" I said He replied, "I have reference to the kindliness, the helpfulness, the absolutely unalloyed interest on the part of each member of your profession in every other man's work" Ladies and gentlemen, I thought that was a great compliment to our profession

The relations existing between the medical profession and the public are becoming closer and more intimate every day For instance, in the task that has to do with preventive medicine we are beginning to find out that we can accomplish very little unless we have the people with us In other words, we must have team play between the profession and the public

This morning, at a meeting of the House of Delegates a strong resolution was passed advocating the transfer of the quarantine station of New York City to the national government under the United States Public Health Service There is a measure I fancy that is reasonable to every person here I have never heard medical men in this neighborhood who have had a word to say against it Through the efforts of the medical profession of New York City and the Medical Society of the State of New York, we have secured from our legislature at Albany a bill authorizing the transfer of the quarantine station to the United States Public Health Service, with the necessary steps having been authorized by Congress When we consider that the Public Health Service in Washington maintains an elaborate health service throughout the entire world, and officers of that service are scattered through Europe and Asia for the express purpose of ascertaining all the facts that can be ascertained about communicable diseases in those countries, with a view of preventing the conveyance of dangerous communicable diseases to our people, you can readily appreciate the importance of the public health work of this country And how can any one help saying it is impossible to have team play in quarantine work, team play in preventive medicine in the United States today, without having all the quarantine stations in the hands of one governing body? As the situation is today, Baltimore is waiting to come in as soon as New York does

I remember talking with one of our legislators a short time ago when I made this remark I do not suppose, after all, what the doctors say to a legislator carries any weight" The legislator replied, "Don't you believe it, I know of no body of men in the country which legislators are as much afraid of as they are of doctors" I said to him, "How do you account for that?" "Well," he replied, 'in the first place, doctors go through the community and visit every house In the second place, they have the confidence of the people In the third place, and, as a rule, they are invariably men who know what they are about, and they have no ax to grind"

I should like to see the members of this association go through the country imbued with the idea that the quarantine stations of the United States should be under the United States government and placed in the hands of the Public Health Service

Gentlemen, with these few words of enthusiastic commendation of the ability of the medical profession to play good, straight-forward, honest and effective team work I, too, on the part of the medical profession of New York City bid you a most affectionate, hearty and enthusiastic welcome to the town (Applause)

Dr Rupert Blue, in introducing and installing the President, Dr Charles H Mayo of Rochester, Minn, said

To introduce one who needs no introduction to any scientific assembly of the world, to present to you a man whose name is and always will be held in affectionate memory by thousands whom his skilful hands have given surcease from pain, and above all to relinquish the high honor of the presidency of the American Medical Association to one so highly respected and so much beloved by us all, is indeed a great honor When one seeks a member of our profession who combines personal virtue and high ideals with scientific acumen and tactful technic with the fearlessness of a soldier and the tenderness of a woman, one turns instantly to one who has given of himself and of his substance to the end that humanity may live in peace and the science of medicine may advance He who combines all these qualities is our President, Dr Charles Mayo (Loud applause)

President Mayo then delivered his address, on "War's Influence on Medicine," which was published in THE JOURNAL, June 9 1917, p 1673

Adjourned

MINUTES OF THE SECTIONS

SECTION ON SURGERY, GENERAL AND ABDOMINAL

Wednesday June 6—Morning

The meeting was called to order at 9 40 by the chairman, Dr William D Haggard Nashville Tenn

Dr William D Haggard the chairman, stated that Dr Eugene H Pool New York secretary had been called to the colors and asked that a motion be made to have Dr J A Victor New York act in his place for the 1917 meeting which was done

Dr William D Haggard Nashville Tenn read the chairman's address entitled Surgery of the Spleen ' No discussion

Dr Arthur Dean Bevan Chicago read a paper on The Problem of Unnecessary Operations and of Incompetent Surgeons ' Discussed by Drs James E. Moore Minneapolis, and Arthur Dean Bevan Chicago

Dr John B Deaver Philadelphia, moved that a committee of ten be appointed by the chairman to further Dr Bevan's ideas relative to this vital question

The motion was seconded

Dr William M Robertson Warren Pa offered an amendment to have the committee report to the Judicial Council for such action as may be deemed proper with instructions to the delegate from this section to report this action to the House of Delegates

This amendment was accepted by Dr Deaver and the motion as amended put and carried (House of Delegates not advised of this motion)

The chairman announced he would appoint the committee at a later session

Dr Donald C. Balfour Rochester Minn read a paper on The Surgical Significance of Gastric Hemorrhage ' Discussed by Drs Fred B Lund, Boston and Donald C Balfour, Rochester Minn

Dr Lewis L McArthur Chicago sent a telegram regretting that he was unable to be present. He specially regretted this as his name appeared on the program for an article on Modification in the Technic of Gastric Surgery "

Dr Willard Bartlett St Louis, read a paper on A New Operation for Floating Kidney Discussed by Drs Hubert A Royster Raleigh N C Daniel N Eisendrath Chicago Philip Marvel Atlantic City N J C E Cantrell Greenville Texas, Martin B Tinker Ithaca, N Y and Willard Bartlett St Louis

Dr Robert C. Coffey Portland Ore read a paper on Intravisceral and Intra-Abdominal Pressure ' Discussed by Drs Edward Martin, Philadelphia and Robert C Coffey, Portland Ore

Wednesday June 6—Afternoon

Dr Allen B Kanavel, Chicago read a paper on 'Clinical and Experimental Data in Relation to Fat Transplantation ' Discussed by Drs Alexius McGlannan, Baltimore, and Allen B Kanavel Chicago

The chairman said that since Dr Bertram M Bernheim, Baltimore, would be obliged to leave for active war duty Thursday, when he was on the program for a paper he would entertain a motion that Dr Bernheim read his paper now The motion was made seconded and carried

Dr Bertram M Bernheim Baltimore read a paper on 'Sodium Citrate Blood Transfusion A Comparison" Discussed by Drs George I Miller, Brooklyn Richard Lewisohn New York Arthur H Bogart, Brooklyn, J Shelton Horsley, Richmond Va and Bertram M. Bernheim, Baltimore

Dr William O N Sherman Pittsburgh read a paper on 'The Abortive Treatment of Infection.' Discussed by Drs Charles L. Gibson New York, George W Hawley, Bridgeport Conn J W Long, Greensboro N C., R. W Corwin Pueblo Colo , E. S Van Duyn Syracuse, N Y , and William O N Sherman Pittsburgh.

Dr Parker Syms, New York, read a paper on 'The Evolution of Cancer of the Breast" Discussed by Drs Daniel N Eisendrath, Chicago and Parker Syms New York.

Dr L Wyllys Andrews, Chicago, read a paper on 'Absorbable Metal Clips for Buried Sutures and Ligatures, and Special Alloy for Rapid Absorption" No discussion

Dr Harry M Sherman San Francisco read a paper on The Closure of Cleft Palate A Technic and the Reasons for It Discussed by Drs Vilray P Blair, St Louis Truman W Brophy Chicago, W B Swift, Boston, and Harry M Sherman San Francisco

Thursday June 7—Morning

Dr Willy Meyer New York read a paper on The Rectangular Flap Incision for Operations Within the Upper Abdomen ' Discussed by Drs Robert E Farr, Minneapolis, Fred B Lund Boston and Willy Meyer New York

Dr Fred B Lund Boston, read a paper on Tumor of the Intercarotid Body Discussed by Drs Stanley Stillman San Francisco and Fred B Lund Boston

Dr William Linder Brooklyn read a paper on The Diagnosis of Acute Pancreatitis with Report of Thirty-Three Cases Discussed by Drs John B Deaver, Philadelphia Ernest Laplace Philadelphia and William Linder Brooklyn

Dr Hugh McKenna Chicago read a paper on Surgery of Bones and Joints with Especial Reference to the Open Operative Treatment of Fractures and a Method of Arthroplasty in Ankylosis of the Elbow Joint" Discussed by Drs Philip H Kreuscher Chicago, R H Gibbons New York and Hugh McKenna Chicago

Dr J Rilus Eastman Indianapolis, read a paper on Gunshot Fractures Preceding the discussion of this paper Dr George W Hawley Bridgeport Conn, showed moving pictures of a new fracture frame combining traction and suspension with fluoroscopic control, especially in military fractures devised by himself

Dr Eastman's paper was then discussed by Drs Leonard Freeman Denver Bernard H Oberembt, Milwaukee, Wis, and Frank P Corrigan Cleveland

Thursday June 7—Afternoon

The following officers were elected Chairman Dr E Starr Judd Rochester Minn vice chairman Dr Robert C Coffey Portland Ore secretary Dr Eugene H Pool New York, assistant secretary Dr George P Miller Philadelphia, delegate Dr Lloyd W McRae, Atlanta, Ga , alternate, Dr Nelson M Percy Chicago

The chairman said Dr Pool our secretary, has been called to Fort Benjamin Harrison and therefore has been unable to be with us and to serve but I am sure the section is indebted to his substitute Dr John A Victor, who has acted so satisfactorily in his absence

Dr Charles H Frazier, Philadelphia read a paper on Choice of Method in Operations on the Pituitary Body Discussed by Drs Charles E Elsberg New York, F S Marshall Muskegon, Mich, and Charles H Frazier, Philadelphia

The following papers were read as a symposium on 'Exophthalmic Goiter'

Dr E C Kendall Rochester, Minn "Studies in Experimental Hyperthyroidism '

Dr George W Crile Cleveland sent a paper on "Exophthalmic Goiter' which on motion by the section, was read by Dr William D Haggard Nashville, Tenn

Dr Charles N Dowd, New York Constitutional Disturbances Which Come with Chronic Goiter "

These three papers were discussed by Drs A J Ochsner, Chicago Martin B Tinker Ithaca, N Y , Solomon Solis Cohen Philadelphia John Rogers, New York, E C. Kendall, Rochester Minn and Charles N Dowd, New York

The acting secretary Dr John A. Victor, read the following list of names as the members appointed by the chairman to study the problem of unnecessary operations and of incompetent surgeons Drs A D Bevan, Chicago, William J Mayo, Rochester Minn George W Crile, Cleveland, John B Deaver Philadelphia, George E. Brewer New York, Emmet Rixford San Francisco, Fred B Lund, Boston, Kenneth A. J McKenzie, Portland, Ore., J M T Finney, Baltimore and William D Haggard, Nashville

Dr Ernest A Codman, Boston, read a paper on "Advantages of the End-Result System to Surgical Science" Discussed by Drs John D Bonnar, Buffalo, Harry M Sherman, San Francisco, and E M Stanton, Schenectady, N Y

Dr Samuel Robinson, Rochester, Minn, read a paper on "The Resection of Lobes of the Lung" Discussed by Drs Howard Lilienthal, New York, Willy Meyer, New York, and Samuel Robinson, Rochester, Minn

Friday, June 8—Morning

A joint session was held with the Section on Pathology and Physiology

The following papers were read and discussed separately as a symposium on "Anesthesia"

Dr Willis D Gatch, Indianapolis "Anesthesia in the Curriculum and Clinic" Discussed by Drs Arthur Dean Bevan, Chicago, E D Lee, New York, S J Meltzer, New York, A F Erdman, Brooklyn, Torald Sollmann, Cleveland, Kenneth A J McKenzie, Portland, Ore, F W Pinneo Newark, N J, and Willis D Gatch, Indianapolis

Dr Conrad Georg, Jr, Ann Arbor, Mich "Pathologic Pulmonary Changes from Endotracheal Insufflation Anesthesia in Experimental Lung Surgery" Discussed by Drs Willy Meyer, New York, Charles H Peck, New York, S J Meltzer, New York, Charles A Elsberg, New York, Samuel Robinson, Rochester, Minn, Franz J A Torek, New York, and Conrad Georg, Jr, Ann Arbor, Mich

The chairman introduced Dr Charles H Mayo, who spoke as follows

It is like getting home again to get back to the surgical section Other duties have kept me away for the first time from much of the work, but I want to commend the work of this section I have been going over it There were only three men who did not appear to read their papers, one, Dr Crile, sent his from London to be read and it was read, and Dr L L McArthur wired that it was impossible for him to come, but that it was the first time in thirty-seven years that he had failed to appear when his name had been on the printed program, showing that it was unavoidable I want to commend the management of this section, which is an easy one to manage, by our worthy chairman And just a moment to say that the reason all the sections are easy to manage this year is to be found in the wonderful organization and efficiency of the committees of the state in preparing everything possible for the section work We all feel a deep obligation to that committee, and I am sure we shall all return home with renewed enthusiasm from attending the greatest meeting ever held by the greatest medical association in the world

Dr Frank C Mann Rochester, Minn "Shock During General Anesthesia" Discussed by Drs Fenton B Turck New York, S J Metzler, New York, and Frank C Mann, Rochester, Minn

The chairman introduced the vice chairman, Dr Robert C Coffey, Portland, Ore, and relinquished the chair to him

Dr Evarts A Graham, Mason City, Iowa "Toxic Factors of Some of the Common Anesthetic Substances" Discussed by Dr C Henry Davis, Chicago

Dr A J Ochsner made a motion, which was seconded and carried, that the section pass a vote of appreciation of the work of the officers of the section which resulted in this magnificent and interesting program

The paper by Dr George E Fell, Chicago, on "Artificial Respiration," was read by Dr A J Ochsner, Chicago Dr Fell was too ill to attend the meeting

---

SECTION ON OPHTHALMOLOGY

Wednesday, June 6—Morning

The section was called to order at 9 o'clock by the chairman, Dr William Zentmayer, Philadelphia

The chairman announced that Dr Edgar S Thomson, New York, would act as secretary of the section in the absence of Dr George S Darby, who is abroad

Dr William Zentmayer, Philadelphia, read the chairman's address, the subject of the scientific portion of which was "The Eye and the Endocrine Organs" No discussion

On motion the chairman's address was referred for action to the executive committee

The secretary announced that Major Theodore C Lyster of the United States Army would deliver an address in the meeting room at 9 p m on the visual tests required in the aviation service of the army

Dr Samuel Theobald, Baltimore, read a paper on "Some Observations Which Seem to Lend Support to a Long Discarded Theory of the Chief Function of the Oblique Muscles of the Eye" Discussed by Drs Lucien Howe, Buffalo, Edward Jackson, Denver, Francis Valk, New York, Alexander Duane, New York, W H Bates, New York, Walter B Lancaster, Boston, Will P Walter, Evanston, Ill, F Park Lewis, Buffalo, and Samuel Theobald, Baltimore

Dr Edmond E Blaauw, Buffalo, read a paper on "Binocular Single Vision Leaving Out the Consideration of the Color Perception and the Problems of Strabismus" A stereoscopic test apparatus was exhibited Discussed by Drs Walter B Lancaster, Boston, F H Verhoeff, Boston, George T Stevens, New York, Francis Valk, New York, Linn Emerson, Orange, N J, Elmer G Starr, Buffalo, Lucien Howe, Buffalo, and Edmond E Blaauw, Buffalo

Dr Frederick H Verhoeff, Boston, read a paper on "The Treatment of Hypopyon Keratitis"

Dr William E Shahan, St Louis, read a paper on "Further Study of the Effects of Heat on the Eye" (with exhibition of instrument for application of heat to the eye)

These two papers were discussed by Drs William C Posey, Philadelphia, Edgar S Thomson, New York, Peter N K Schwenk, Pihladelphia, John E Weeks, New York, Elmer G Starr, Buffalo, J A Donovan, Butte, Mont., Melville Black, Denver, R L Randolph, Baltimore, S Lewis Ziegler, Philadelphia, F Park Lewis, Buffalo, L Webster Fox, Philadelphia, William Zentmayer, Phialdelphia, Frederick H Verhoeff, Boston, and William E Shahan, St Louis

Dr F Park Lewis, Buffalo, read a paper on "Crystalline Deposits in the Eye" Discussed by Drs Burton Chance, Philadelphia, and Melville Black, Denver

Wednesday, June 6—Afternoon

The section was called to order at 2 o'clock by the chairman, Dr William Zentmayer, Philadelphia

On motion the section went into executive session

Dr Lucien Howe, Buffalo, chairman, presented the report of the Committee on Collective Investigation Concerning the Ocular Muscles Dr W L Pyle, Philadelphia, moved that the report of the committee be adopted Seconded by Dr C D Wescott, Chicago Carried

The scientific session was resumed and the following instruments and appliances were exhibited

Dr Norman W Price, Niagara Falls, N Y, exhibited a new phorometer which may be used comfortably by the patient at the bedside, and which measures accurately The instrument consists of a dial graduated from 0 to 90 degrees, with a long arm and a mirror at the end in which the patient watches his own eye The patient sits with his back to the light and the oculist turns the dial in front of the patient's eye When it is directly in front the dial registers 0, and as it is turned down it will register anywhere up to 90 degrees The dial turns on itself at all angles so that the angle can be obtained at any point It can be used rapidly, taking only one quarter of the time of the ordinary phorometer

Dr Walter L Pyle, Philadelphia, exhibited a model of a new trial frame for test lenses, the advantage of which is the ability to place it in firm position on the sides of the nose and the adjacent cheeks approximately in the position that the prospective spectacles or eye glasses will be worn The frame can be lowered or raised by a screw, the two sides of the frame can be moved independently, of advantage in the numerous cases in which the eyes are unequally distant from the nose A special construction permits the turning of the screw for lateral motion, over the eye opposite to the one being tested, thus avoiding obstruction by the examiner's hand The frame is rigid without being heavy

Dr Henry H Briggs, Asheville, N C, exhibited a hook and link with which he demonstrated his method of shortening an ocular muscle, described in his paper in the program on 'Tendon Shortening"

Dr E R Crossley, Chicago, exhibited a model of his apparatus for immobilization of the head and eyelids during operations on the eyeball

Dr Edmond E Blaauw, Buffalo, exhibited with his paper at the morning session an apparatus for determining stereoscopic vision

Dr Francis Valk New York exhibited, in the discussion on Dr Blaauw s paper, apparatus for determining stereoscopic vision

Dr Alan C Woods Philadelphia, read a paper on The Anaphylactic Basis of Sympathetic Ophthalmia An Experimental Study " Discussed by Drs George E de Schweinitz Philadelphia, J W Jervey, Greenville S C, F H Verhoeff, Boston Stewart B Muncaster, Washington D C, Mark J Schoenberg New York and Alan C Woods, Philadelphia

Dr Arthur J Bedell, Albany N Y, read a paper on Oxycephalia Report of Three Cases, with Operation in One No Discussion

Dr William B Chamberlin Cleveland, read a paper on The Endonasal Operation on the Lacrimal Sac" Discussed by Drs Harris P Mosher Boston, and Dr William B Chamberlin Cleveland

Dr Frank C Todd Minneapolis chairman of the executive committee presented a resolution for the action of the section that had the approval of the executive committee requesting the House of Delegates to permit the section to begin its sessions on Tuesday afternoon of the meeting instead of Wednesday morning as at the present session

On motion of Dr G E de Schweinitz Philadelphia duly seconded the action of the executive committee was approved and the committee was instructed to present the matter to the House of Delegates (Not transmitted to the House of Delegates)

Dr Clifford B Walker Boston read a paper on Neurologic Perimetry and a Method of Imitating Daylight with Electrical Illumination Discussed by Dr Luther C Peter Philadelphia

Dr Walter R Parker Detroit gave a Demonstration of Pathologic Changes in the Optic Nerve in Cases of Artificially Induced Intracranial Pressure ' No discussion

Thursday June 7—Morning

The meeting was called to order at 9 o clock by the chairman Dr William Zentmayer Philadelphia

The executive committee reported that it desired to endorse the suggestion of the chairman of the section concerning the appointment of a committee on social service as related to ophthalmology and recommended that the present chairman appoint that committee

The committee also recommended the appointment of Dr Peter A. Callan New York as memorialist for Dr W B Marple New York deceased and Dr Luther C Peter, Philadelphia as memorialist for Dr Wendell Reber Philadelphia deceased

On account of the absence of the secretary, Dr George S Derby Boston in Europe in military hospital medical service, the committee reported that Dr Edgar S Thomson New York had consented to act as secretary of the section during Dr Derby s absence

The term of Dr Hiram Woods Baltimore, as a member of the Board on Ophthalmic Examinations, had expired It seemed desirable in this initial period, that he be continued for another period of three years

On motion duly seconded the report of the executive committee was adopted.

The following officers were elected chairman, Dr Alexander Duane New York, vice chairman, Dr F Phinizy Calhoun Atlanta Ga acting secretary, Dr Edgar S Thomson New York, delegate, Dr Thomas B Holloway, Philadelphia, alternate Dr McLeish

Dr Edward Jackson Denver, chairman, read the report of the Committee on Standardizing Test Cards

On motion, duly seconded, the report was adopted and the committee continued. The report will be found in the printed transactions of the section

Dr Edward Jackson, Denver, read the annual report of the American Board for Ophthalmic Examinations

Dr S D Risley moved the adoption of the report with its recommendations Seconded and carried

Dr Walter R Parker, Detroit, made a verbal report of the Committee on the Elliot Trephine Operation, which will be found in the transactions of the section, in which a request was made for funds for continuing the work of the committee

Dr S D Risley Philadelphia moved the continuance of the committee and the furnishing of funds Dr A E Bulson Jr Fort Wayne Ind suggested that the plea for funds be referred to the Knapp Testimonial Committee, as the section had no funds He made this as an amendment to Dr Risley s motion and the amendment was accepted by Dr Risley The motion as amended then carried

Dr A E Bulson Jr, Fort Wayne, Ind, read the Report of the Committee on the Knapp Testimonial Fund

Dr John E Weeks New York, moved that the report be accepted and filed There were no objections and it was so ordered

Dr John E Weeks New York read the report of the Committee on Award of the Knapp Medal which will be found in the transactions The committee awarded the medal to Dr Walter R Parker, Detroit in recognition of the work described in 1916 in his paper on The Relation of Choked Disk to the Tension of the Eyeball an Experimental Study "

Dr A E Bulson Jr moved that the report be accepted It was seconded by Dr S D Risley and the motion was carried

Dr A E Bulson, Jr, by direction of the chairman, presented the medal to Dr Parker, who expressed his appreciation

Dr Frank Allport Chicago chairman of the Committee on Conservation of Vision was not present but sent a letter This with a report made by Dr Hiram Woods, Baltimore will be found in the transactions, also a letter from Edward N Van Cleave managing director of the executive staff of the National Committee for the Prevention of Blindness suggesting the continuance of the committee and the appointment of a New York member of the section to act as local chairman for Dr Allport, and that it act with the national committee under the name of The Committee on Conservation of Vision American Medical Association Cooperating with the National Committee for the Prevention of Blindness The name of Dr Walter B Weidler of New York was suggested as the local acting chairman Dr Woods recommended that the suggestion of Mr Van Cleave be accepted

Dr A E Bulson Jr moved that the section approve the plan as proposed and that the committee as far as the section is concerned continue the work as outlined Seconded by Dr S D Risley and carried

Nominations were made for members of the Committee on Award of the Knapp Medal The following were selected Drs Walter R Parker, Detroit, William H Wilder, Chicago, and Arnold Knapp New York

Dr Hiram Woods Baltimore, presented a resolution which, after discussion and amendment, was adopted in the following form

> Whereas It is officially stated that in the present crisis of our country the government will need the services of every available medical man and
>
> Whereas The present number of ophthalmologists in the regular medical department and Officers Reserve Corps is too small to meet requirements and further
>
> Whereas The present classification of ophthalmologists as surgeons has a tendency to prevent volunteering because it is apt to assign to men of special training work for which they are unfitted and to remove them from work of great importance which they can do therefore be it
>
> *Resolved* By the Section on Ophthalmology of the American Medical Association in session in New York June 1917 that the section respectfully makes the following recommendations
>
> 1 That ophthalmologists be classed as a separate division of the medical department
>
> 2 That a survey be made of the ophthalmologists of the United States for duty in various lines of work (examination of visual qualifi

Dr Ernest A Codman, Boston, read a paper on "Advantages of the End-Result System to Surgical Science" Discussed by Drs John D Bonnar, Buffalo, Harry M Sherman, San Francisco, and E M Stanton, Schenectady, N Y

Dr Samuel Robinson, Rochester, Minn, read a paper on "The Resection of Lobes of the Lung" Discussed by Drs Howard Lilienthal, New York, Willy Meyer, New York, and Samuel Robinson, Rochester, Minn

Friday, June 8—Morning

A joint session was held with the Section on Pathology and Physiology

The following papers were read and discussed separately as a symposium on "Anesthesia"

Dr Willis D Gatch, Indianapolis "Anesthesia in the Curriculum and Clinic" Discussed by Drs Arthur Dean Bevan, Chicago, E D Lee, New York, S J Meltzer, New York, A F Erdman, Brooklyn, Torald Sollmann, Cleveland, Kenneth A J McKenzie, Portland, Ore, F W Pinneo Newark, N J, and Willis D Gatch, Indianapolis

Dr Conrad Georg, Jr, Ann Arbor, Mich "Pathologic Pulmonary Changes from Endotracheal Insufflation Anesthesia in Experimental Lung Surgery" Discussed by Drs Willy Meyer, New York, Charles H Peck, New York, S J Meltzer, New York, Charles A Elsberg, New York, Samuel Robinson, Rochester, Minn, Franz J A Torek, New York, and Conrad Georg, Jr, Ann Arbor, Mich

The chairman introduced Dr Charles H Mayo, who spoke as follows

It is like getting home again to get back to the surgical section Other duties have kept me away for the first time from much of the work, but I want to commend the work of this section I have been going over it There were only three men who did not appear to read their papers, one, Dr Crile, sent his from London to be read and it was read, and Dr L L McArthur wired that it was impossible for him to come, but that it was the first time in thirty-seven years that he had failed to appear when his name had been on the printed program, showing that it was unavoidable I want to commend the management of this section, which is an easy one to manage, by our worthy chairman And just a moment to say that the reason all the sections are easy to manage this year is to be found in the wonderful organization and efficiency of the committees of the state in preparing everything possible for the section work We all feel a deep obligation to that committee, and I am sure we shall all return home with renewed enthusiasm from attending the greatest meeting ever held by the greatest medical association in the world

Dr Frank C Mann Rochester, Minn "Shock During General Anesthesia" Discussed by Drs Fenton B Turck, New York, S J Metzler, New York, and Frank C Mann, Rochester, Minn

The chairman introduced the vice chairman, Dr Robert C Coffey, Portland, Ore, and relinquished the chair to him

Dr Evarts A Graham, Mason City, Iowa "Toxic Factors of Some of the Common Anesthetic Substances" Discussed by Dr C Henry Davis, Chicago

Dr A J Ochsner made a motion, which was seconded and carried, that the section pass a vote of appreciation of the work of the officers of the section which resulted in this magnificent and interesting program

The paper by Dr George E Fell, Chicago, on "Artificial Respiration," was read by Dr A J Ochsner, Chicago Dr Fell was too ill to attend the meeting

SECTION ON OPHTHALMOLOGY

Wednesday, June 6—Morning

The section was called to order at 9 o'clock by the chairman, Dr William Zentmayer, Philadelphia

The chairman announced that Dr Edgar S Thomson, New York, would act as secretary of the section in the absence of Dr George S Darby, who is abroad

Dr William Zentmayer, Philadelphia, read the chairman's address, the subject of the scientific portion of which was "The Eye and the Endocrine Organs" No discussion

On motion the chairman's address was referred for action to the executive committee

The secretary announced that Major Theodore C Lyster of the United States Army would deliver an address in the meeting room at 9 p m on the visual tests required in the aviation service of the army

Dr Samuel Theobald, Baltimore, read a paper on "Some Observations Which Seem to Lend Support to a Long Discarded Theory of the Chief Function of the Oblique Muscles of the Eye" Discussed by Drs Lucien Howe, Buffalo, Edward Jackson, Denver, Francis Valk, New York, Alexander Duane, New York, W H Bates, New York, Walter B Lancaster, Boston, Will P Walter, Evanston, Ill, F Park Lewis, Buffalo, and Samuel Theobald, Baltimore

Dr Edmond E Blaauw, Buffalo, read a paper on "Binocular Single Vision Leaving Out the Consideration of the Color Perception and the Problems of Strabismus" A stereoscopic test apparatus was exhibited Discussed by Drs Walter B Lancaster, Boston, F H Verhoeff, Boston, George T Stevens, New York, Francis Valk, New York, Linn Emerson, Orange, N J, Elmer G Starr, Buffalo, Lucien Howe, Buffalo, and Edmond E Blaauw, Buffalo

Dr Frederick H Verhoeff, Boston, read a paper on "The Treatment of Hypopyon Keratitis"

Dr William E Shahan, St Louis, read a paper on "Further Study of the Effects of Heat on the Eye" (with exhibition of instrument for application of heat to the eye)

These two papers were discussed by Drs William C Posey, Philadelphia, Edgar S Thomson, New York, Peter N K Schwenk, Pihladelphia, John E Weeks, New York, Elmer G Starr, Buffalo, J A Donovan, Butte, Mont, Melville Black, Denver, R L Randolph, Baltimore, S Lewis Ziegler, Philadelphia, F Park Lewis, Buffalo, L Webster Fox, Philadelphia, William Zentmayer, Phialdelphia, Frederick H Verhoeff, Boston, and William E Shahan, St Louis

Dr F Park Lewis, Buffalo, read a paper on "Crystalline Deposits in the Eye" Discussed by Drs Burton Chance, Philadelphia, and Melville Black, Denver

Wednesday, June 6—Afternoon

The section was called to order at 2 o'clock by the chairman, Dr William Zentmayer, Philadelphia

On motion the section went into executive session

Dr Lucien Howe, Buffalo, chairman, presented the report of the Committee on Collective Investigation Concerning the Ocular Muscles Dr W L Pyle, Philadelphia, moved that the report of the committee be adopted Seconded by Dr C D Wescott, Chicago Carried

The scientific session was resumed and the following instruments and appliances were exhibited

Dr Norman W Price, Niagara Falls, N Y, exhibited a new phorometer which may be used comfortably by the patient at the bedside, and which measures accurately The instrument consists of a dial graduated from 0 to 90 degrees, with a long arm and a mirror at the end in which the patient watches his own eye The patient sits with his back to the light and the oculist turns the dial in front of the patient's eye When it is directly in front the dial registers 0, and as it is turned down it will register anywhere up to 90 degrees The dial turns on itself at all angles so that the angle can be obtained at any point It can be used rapidly, taking only one quarter of the time of the ordinary phorometer

Dr Walter L Pyle, Philadelphia, exhibited a model of a new trial frame for test lenses, the advantage of which is the ability to place it in firm position on the sides of the nose and the adjacent cheeks approximately in the position that the prospective spectacles or eye glasses will be worn The frame can be lowered or raised by a screw, the two sides of the frame can be moved independently, of advantage in the numerous cases in which the eyes are unequally distant from the nose A special construction permits the turning of the screw for lateral motion, over the eye opposite to the one being tested, thus avoiding obstruction by the examiner's hand The frame is rigid without being heavy

Dr Henry H Briggs, Asheville, N C, exhibited a hook and link with which he demonstrated his method of shortening an ocular muscle, described in his paper in the program on "Tendon Shortening"

Dr Louis J Ladinski New York read a paper on Ectopic Gestation Discussed by Drs L Gustav Zinke Cincinnati, J H Carstens Detroit, William W Golden Elkins W Va, Edward J McOscar, Fort Wayne, Ind, and Louis J Ladinski, New York

Thursday June 7—Morning

Dr John W Keefe Providence, R I, read a paper on Prolapse of the Female Urethra Discussed by Drs Guy L. Hunner Baltimore Brooke M Anspach, Philadelphia, and John W Keefe Providence R I

Drs Guy L. Hunner and George L. Stickney Baltimore presented a paper on Further Notes on a Rare Type of Bladder Ulcer with Report of Eighteen Cases Discussed by Dr Edward H Richardson Baltimore D N Eisendrath Chicago Winebergr N Y Frank D Reese Cortlandt N Y, P B Salatich New Orleans H W Longyear, Detroit and Guy L. Hunner Baltimore

Dr Axel F W Werelius Chicago read a paper on Ureterotubal and Uretero Uterine Anastomosis' Discussed by Drs Julius H Jacobson Toledo Ohio Alfred A Strauss Chicago D N Eisendrath Chicago, P B Salatich New Orleans J Henry Barbat San Francisco William P Graves, Boston and Axel F W Werelius Chicago

Dr William P Graves Boston read a paper on Ovarian Organotherapy A Preliminary Report Discussed by Drs Clarence G Bandler New York Emil Novak Baltimore, Lawrence W Strong New York P B Salatich New Orleans Adam P Leighton Jr Portland Me and William P Graves Boston

Dr Robert T Morris New York read a paper on Appendicitis and the Gynecologist Discussed by Drs John B Deaver Philadelphia W M Polk New York Lee New York Emil Novak Baltimore Chester M Echols Milwaukee, Wis E E Montgomery Philadelphia Bernard Cohen Buffalo J H Carstens Detroit Guy L. Hunner Baltimore and Robert T Morris New York

Dr Robert E Farr Minneapolis read a paper on 'Technic and Scope of Local Anesthesia in Abdominal Surgery ' illustrated by motion pictures Discussed by Drs Charles F Nassau Philadelphia F J Keller Patterson N J J H Jacobson Toledo Ohio P B Salatich New Orleans and Robert E Farr Minneapolis

Thursday June 7—Afternoon

The following officers were elected chairman Dr Brooke M Anspach Philadelphia vice chairman Dr R F Skeel Cleveland secretary Dr Sidney A Chalfant Pittsburgh delegate Dr Horace G Wetherill Denver alternate Dr Thomas S Cullen Baltimore

Dr John Osborn Polak Brooklyn read a paper on Why the Menstrual Function Should Be Preserved in Double Suppurative Disease of the Tubes Discussed by Drs E. E. Montgomery Philadelphia Bertha Van Hoosen Chicago, H J Boldt New York Harvey P Jack Hornell N Y R H Gibbons New York H O Marcy Boston and John Osborn Polak Brooklyn

Dr Daniel N Eisendrath Chicago read a paper on Causes of Recurrence After Operations on the Bile Passages" Discussed by Drs W Wayne Babcock Philadelphia John B Deaver Philadelphia E MacD Stanton Schnectady N Y, and R H Gibbons New York

Dr John B Deaver Philadelphia read a paper on 'Acute Pancreatitis Discussed by Drs Russell S Fowler, Brooklyn and R H Gibbons New York

Dr Charles A. L. Reed Cincinnati, read a paper on ' Physiologic Colectomy Discussed by Drs Willard Bartlett St Louis, John G Clark Philadelphia Fenton B Turck, New York Alfred A Strauss Chicago R. H Gibbons, New York, and Charles A L. Reed Cincinnati

Dr William J Mayo Rochester Minn read a paper on 'Diverticulitis of the Large Intestine ' Discussed by Drs Roberts Brooklyn, Miles F Porter Fort Wayne, Ind and W J Mayo Rochester, Minn

Dr J Shelton Horsley Richmond Va read a paper on 'Personal Experience in the Surgical Treatment of Intestinal Stasis ' Discussed by Drs John W Draper, New York, and Richard L Brown New York

Friday, June 8—Morning

Dr Miles F Porter Fort Wayne Ind, read a paper on Cholecystostomy Versus Cholecystectomy ' Discussed by Drs Howard Lilienthal New York, H J Boldt, New York, J H Carstens Detroit, D C Strong San Bernardino, Calif, J W Vaughan Detroit and Miles F Porter Fort Wayne, Ind

A telegram was received from Dr Louis Frank, Louisville, Ky offering to forward his paper that it might be read by title and published if it might be so received It was stated that under the ruling of the House of Delegates, papers could not be published unless read in the section

Dr Horace G Wetherill Denver delegate of the section to the House of Delegates expressed his appreciation of election as delegate and also his regret since he was necessarily absent from the scientific work

A motion to thank Dr Wetherill for his work as delegate to the House of Delegates was seconded and carried

Dr Stuart McGuire Richmond Va read a paper on ' Preparation of Anemic Patients for Operation Discussed by Drs Sidney A Chalfant Pittsburgh, Howard Lilienthal, New York H J Boldt New York and P B Salatich, New Orleans

Dr J Walter Vaughan Detroit read a paper on ' When Is Cancer Operable Discussed by Drs Henry Schmitz, Chicago Clarence G Bandler New York and J Walter Vaughan, Detroit

Dr James F Percy Galesburg Ill read a paper on The End Result of the Treatment of Inoperable Uterine Cancer by Heat Discussed by Drs Herman J Boldt, New York, F Walcott Bancroft New York Leonard New York, George B Ward New York J Shelton Horsley, Richmond, Va H C Bailey New York Frank L Newton Boston, and James F Percy Galesburg Ill

Dr Henry Schmitz Chicago read a paper on The Present Status of Radium Therapy in Diseases of Women" Discussed by Drs Anthony Joseph Mendillo New Haven, Conn, and Henry Schmitz Chicago

Dr Abraham J Rongy New York read a paper on ' Prolapsus Uteri and Its Treatment Discussed by Drs Frank L Newton Boston Jacob A Ruben Pittsburgh Harry Aranow New York Harvey P Jack, Hornell N Y, and Abraham J Rongy New York

---

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Wednesday June 6—Morning

The meeting was called to order by the chairman, Dr Francis P Emerson Boston Dr Emerson then read the Chairman's Address

Dr George L. Richards Fall River Mass, moved that the Committee appointed at the Atlantic City meeting consisting of Charles W Richardson, Washington, H P Mosher, Boston and Burt R Shurly Detroit, be retained by this section Motion seconded and carried

Dr Hubert Arrowsmith Brooklyn read a paper on "Peroral Endoscopy in the Diagnosis and Treatment of Diseased Conditions of the Respiratory and Upper Digestive Tracts" Discussed by Drs Samuel Iglauer Cincinnati H W Frauenthal, New York Chevalier Jackson, Philadelphia, and H P Mosher Boston

Major Theodore Charles Lyster Washington, D C gave a short talk on the work of the men of this section in the present war

Dr Chevalier Jackson Philadelphia read a paper on "The Etiology of Foreign Bodies in the Larynx, Trachea, Bronchi and Esophagus," with lantern demonstration Discussed by Drs Harris P Mosher, Boston, Jacques Holinger, Chicago, and S A Friedberg, Chicago

Dr Joseph C Beck, Chicago, read a paper on "The Surgery of the Tongue," with lantern demonstration Discussed by Drs George F Keiper, Lafayette, Ind., Sargent F Snow, Syracuse, N Y, Lee M Hurd, New York, and William R. Butt, Canton, Ohio

Dr Wendell C Phillips of New York, presented moving pictures of a Simple Mastoid Operation

WEDNESDAY, JUNE 6—AFTERNOON

Dr Edward B Dench, New York, read a paper on "Indications for the Mastoid Operation in Acute Otitis Media" Discussed by Drs John F Barnhill, Indianapolis, George W MacKenzie, Philadelphia, George F Keiper, Lafayette, Ind, and C R Holmes, Cincinnati

Dr Norval H Pierce, Chicago, presented moving pictures of an operation on the ethmoid

Dr Norval H Pierce, Chicago, read a paper on "Pathologic Conditions of the Nose, Epipharynx and Pharynx as Etiologic Factors in Aural Disease" Discussed by Drs Cullen F Welty, San Francisco, and George E Shambaugh, Chicago

Dr Cullen F Welty, San Francisco, read a paper on "Indications for the Radical Mastoid Operation" Discussed by Drs Jacques Holinger, Chicago, George W MacKenzie, Philadelphia, and Joseph C Beck, Chicago

Dr John E MacKenty, New York, read a paper on "Hemilaryngectomy and Total Laryngectomy," with lantern demonstration Discussed by Drs D Crosby Greene, Boston, Henry W Horn, San Francisco, Joseph C Beck, Chicago, and La Fayette Page, Indianapolis

Dr Charles W Richardson, Washington, D C, read a paper on "Treatment of Acute Pulmonary Abscess" Discussed by Dr George F Cott, Buffalo, who presented lantern slides

Dr Otto J Stein, Chicago, read a paper on "Sudden and Profound Loss of Hearing, Its Significance" Discussed by Drs Henry S Wieder, Philadelphia, T O Edgar, Dixon, Ill, and Cullen F Welty, San Francisco

THURSDAY, JUNE 7—MORNING

Dr Louis Ostrom, Jr, Rock Island, Ill, showed a tonsil instrument, a modification of the Sluder tonsillotome

Dr A A Hayden, Chicago, showed a pillar suturing apparatus for the tonsil

The chairman appointed the following committees

Committee on Necrology Drs A B Duel and Emil Mayer

Nominating Committee Drs H W Loeb, H P Mosher and Norval H Pierce

Dr Greenfield Sluder, St. Louis, read a paper on "A Surgical Consideration of the Upper Paranasal Cells" Discussed by Drs H Holbrook Curtis, New York and Lee M Hurd, New York

The following papers were read as a symposium on "Vertigo"

Dr George E Shambaugh, Chicago "Vertigo as a Symptom of Primary Disease of the Labyrinth"

Dr Philip D Kerrison, New York "Aural Vertigo Occurring in Suppurative Disease of the Ear"

Dr Theadore H Weisenburg, Philadelphia "Vertigo in Intracranial Disease"

Dr Isaac H Jones, Philadelphia "Diagnosis of Vertigo, from Whatever Cause, by Ear Tests," with lantern demonstration

These four papers were discussed by Drs H T Patrick, Chicago, Wells P Eagleton, Newark, N J, George W MacKenzie, Philadelphia, Lewis Fisher, Philadelphia, E L Myers, St Louis, Norval H Pierce, Chicago, George F Keiper, Lafayette, Ind, Philip D Kerrison, New York, and A A Hayden, Chicago

THURSDAY, JUNE 7—AFTERNOON

Dr T J Harris moved that the Executive Committee of this section be instructed to investigate, and report at the next meeting of this section, on the advisability of establishing a new journal on otolaryngology Seconded and carried

Dr Elmer L Kenyon moved that the Executive Committee be authorized and instructed to cooperate with the Board of Trustees in carrying out the new plans with reference to the publication of section papers Seconded and carried

The following officers were elected chairman, Dr Greenfield Sluder, St Louis, vice chairman, Dr Philip D Kerrison, New York, secretary, Dr L W Dean, Iowa City, Iowa, delegate, Dr George L Richards, Fall River, alternate, Dr Ross H Skillern, Philadelphia

Dr Emil Mayer read the report of the Committee on Necrology, which included the obituaries of Dr Hudson K Makuen, New York, and Dr David Braden Kyle, Philadelphia

Dr Mayer also reported the successful result of the appeal to the physicians in the case of the widow of Dr Jules Broeckaert, of Belgium

Dr T J Harris moved that the thanks of this section be extended to Dr Emil Mayer for his work in connection with the Broeckaert Fund Seconded and carried

Dr W B Chamberlain moved that the chairman appoint a committee of three to act as a permanent necrology committee The chairman appointed, as this committee, Drs Emil Mayer, W B Chamberlain, and T J Harris

Dr Dayton C Miller, Cleveland, read a paper on "The Science of Musical Sounds" Discussed by Drs H P Mosher, Boston, W B Swift, Boston, Jacques Holinger, Chicago, and Bertha Carol Downing, Worcester, Mass

Dr George L Richards, Fall River, Mass, read a paper on "The Hearing Test from a Practical Standpoint" Discussed by Drs W B Chamberlain, Cleveland, Cullen F Welty, San Francisco, George W MacKenzie, Philadelphia, and Jacques Holinger, Chicago

FRIDAY, JUNE 8—MORNING

Dr Henry W Horn, San Francisco, read a paper on "The End-Results in the Treatment of Ozena by Means of Vaccine," with lantern demonstration. Discussed by Drs J G Dwyer, New York, Thomas J Harris, New York, L A Coffin, New York, H W Frauenthal, New York, and William R. Murray, Minneapolis

Dr Ross H. Skillern, Philadelphia, read a paper on "The Diagnosis and Treatment of Sinusitis in Infants" Discussed by Drs Albert H. Beifield, Iowa City, Iowa, L A. Coffin, New York, and Greenfield Sluder, St. Louis

Dr Lewis Fisher, Philadelphia, read a paper on "Simplicity of Technic in Submucous Resection of the Septum," with lantern demonstration Discussed by Drs W W Carter, New York, William R. Butt, Canton, Ohio, J D Lewis, Minneapolis, T R. Chambers, Jersey City, and Emil Mayer, New York.

Dr Greenfield Sluder presented forceps for dealing with the lateral wall of the antrum These forceps are analogous to the exploratory puncture of the needle in the lower meatus

Dr Elmer L. Kenyon, Chicago, read a paper on "Disturbances of Voice Following Tonsillectomy Their Causes and Prevention," with lantern demonstration Discussed by Drs I W Voorhees, New York, W B Swift, Boston, H P Mosher, Boston, D J McDonald, New York, and Jacob Braun, New York.

Dr Julius Dworetzky, Otisville, N Y, read a paper on "The Diagnosis of Tuberculous Laryngitis," with lantern demonstration Discussed by Drs H. W Frauenthal, New York, and Emil Mayer, New York

Dr H P Mosher moved that vote of thanks be extended to the New York men for their work in connection with this meeting Seconded and carried

The retiring chairman, Dr Francis P Emerson, introduced the chairman-elect Dr Greenfield Sluder, who expressed his appreciation of the honor conferred on him

Dr Emil Mayer moved that a vote of thanks be extended to the retiring officers for their work in making this program as valuable in a scientific way as any that has ever been presented before the section

SECTION ON DISEASES OF CHILDREN

Wednesday, June 6—Morning

The meeting was called to order at 9 10 by the chairman, Dr J P Sedgwick, Minneapolis Dr Sedgwick read the chairman's address, entitled The Institution Reestablishment and Maintenance of Breast Feeding" No discussion

Dr Isaac A Abt, Chicago, read a paper on 'The Technic of Wetnurse Management in Institutions" Discussed by Drs Fritz Talbot Boston, Henry M Silver, New York, Jacob Sobel New York, Richard J E Scott, New York, Charles Herrman, New York, Owen H Wilson, Nashville, Tenn , Charles L Summers, Winston Salem, N C , Leo Wolf Buffalo, Frank S Churchill, Chicago, L J Huenekens, Minneapolis, Chappell, Grand Rapids, Mich , and Isaac A Abt Chicago

Dr Bert R Hoobler, Detroit, read a paper on Problems Connected with the Production and Collection of Human Milk.' Discussed by Drs Thomas S Southworth, New York Henry I Bowditch Boston, William P Lucas, San Francisco Louis H Schwartz New York Lawrence T Royster Norfolk Va , L R DeBuys, New Orleans, Walter J Heimann New York R R Ferguson Chicago, T C McCleave Oakland Calif , Faison Charlotte, N C, Oliver Hill Knoxville, Tenn , F N Rogers, Manchester, N H Bert R Hoobler, Detroit

Dr Harry M McClanahan Omaha, read a paper on 'The Use of Lactic Bacilli Milk Discussed by Drs J P Crozer Griffith Philadelphia and Harry M McClanahan, Omaha

Dr Thomas S Southworth New York read a paper on The Familial Tendency to Fat Incapacity in Infancy and Childhood.' Discussed by Drs Louis C Ager, Brooklyn, Frank C Neff Kansas City Mo , Fritz Talbot Boston, Bert R Hoobler Detroit David E English Summit, N J, and Thomas S Southworth New York

Wednesday June 6—Afternoon

Dr Harry M McClanahan explained to the members of the section about the action taken by the House of Delegates reducing the units allowed this section which would result in decreasing the number of papers read to about half the number generally presented Discussed by Drs Isaac A Abt, Chicago, William P Lucas, San Francisco, Clifford G Grulee Chicago, L R DeBuys New Orleans, T C McCleave Oakland Calif , Richard J E Scott New York, R R Ferguson Chicago and J P Sedgwick Minneapolis

Dr William P Lucas San Francisco made a motion that the chairman appoint a committee to draw up a protest to be presented tomorrow to the House of Delegates in reference to its action in decreasing the units allowed this section and that the entire section adjourn at 2 o'clock and proceed to the House of Delegates with our committee

Seconded and carried unanimously

The chairman appointed the following committee as above outlined Dr William P Lucas San Francisco, Dr Isaac A Abt Chicago, Dr E C Fleischner, San Francisco

Drs E C Fleischner and K F Meyer San Francisco presented a paper on Observations on the Presence of the Bacillus Abortus in Certified Milk" Discussed by J P Sedgwick Minneapolis and E C Fleischner San Francisco

Dr Clifford G Grulee, Chicago read a paper on 'Rumination in the First Year of Life" Discussed by Drs R. Taylor, Minneapolis, John Lovett Morse Boston, James H Kerley, New York, I H Goldberg, New York, and Clifford G Grulee Chicago

Drs Lawrence R DeBuys and Adolph Henriques, New Orleans presented a paper on 'The Effect of Body Posture on the Position and Emptying Time of the Stomach ' Discussed by Drs Louis C Ager, Brooklyn, R Taylor of Minneapolis, and L. R. DeBuys, New Orleans

Dr Louis Fischer, New York read a paper on 'Recent Literature Pertaining to Vitamins Their Application in Infant Feeding" Discussed by Drs Richard J E. Scott, New York, Thomas S Southworth, New York, I H Goldberger, New York, and Louis Fischer of New York.

Dr William P Lucas, San Francisco, read a paper on A Study of Diarrheal Conditions Found in California, Especially in San Francisco, and a Comparison of Such Conditions in California and on the Atlantic Seacoast" Discussed by Drs Lawrence T Royster, Norfolk Va , Henry I Bowditch, Boston, Jacob Sobal, New York, Isaac A Abt, Chicago, and William P Lucas, San Francisco

Dr Henry D Chapin, New York, read a paper on "A Comparison Between Clinical Examination and Roentgenograms in Diseases of the Chest" Discussed by Drs John Lovett Morse Boston, A C Eastman Springfield, Mass , J I Benjamin Cincinnati, I S Hirsch, New York, and E S Rimer, New York

Dr Isaac A Abt, Chicago chairman of the committee appointed to present protest to the House of Delegates, reported

Thursday, June 7—Morning

Dr Henry J Cartin, Johnstown Pa, read a paper on Intubation of the Larynx" Discussed by J F Hogan, Baltimore H L. Whitney Plymouth Pa , A J Bell, Cincinnati Isaac A Abt, Chicago, and Lawrence T Royster, Norfolk Va

Dr J P Crozer Griffith Philadelphia, read a paper on "The Weight of Clothing in the First Five Years of Life" Discussed by Drs Frank C Neff, Kansas City, Mo, and J P C Griffith, Philadelphia

Dr John Lovett Morse Boston read a paper on 'Edebohls' Operation in Nephritis in Childhood" Discussed by Drs J S Wall Washington, and J L. Morse, Boston

Dr Julius H Hess Chicago read a paper on "Diagnosis of the Age of the Fetus by Roentgenograms ' No discussion

Drs Albert Graeme Mitchell and J Claxton Gittings, Philadelphia presented a paper on Phenolsulphonephthalein Elimination in Infants and Children" Discussed by Drs J P Sedgwick Minneapolis, J S Leopold, New York, J L. Morse Boston and J Claxton Gittings Philadelphia

Dr Edgar J Huenekens Minneapolis, read a paper on The Prophylactic Use of Pertussis Vaccine, Controlled by the Complement Fixation Test Discussed by Drs Alfred Hess New York John Foote Washington D C , H L F Locke Hartford Conn Fisher, New York, Faison Charlotte N C Luttinger New York, and E J Huenekens, Minneapolis

By unanimous vote it was decided to proceed immediately with the afternoon's program as at the committee's suggestion the entire section was to adjourn to the meeting of the House of Delegates in the afternoon, to protest against the proposed reduction in the time allotted the section

The following officers were elected chairman, Dr Lawrence R DeBuys New Orleans, vice chairman, Dr Richard M Smith Boston delegate Dr T C McCleave, Oakland, Calif

Dr Richard M Smith, Boston read a paper on 'Pyelitis in Infants The Phenolsulphonephthalein Test"

Dr Henry F Helmholz, Evanston Ill, read a paper on Experimental Pyelitis in the Rabbit"

Thursday, June 7—Afternoon

The section met according to agreement, at the Academy of Medecine where the House of Delegates was in session, and stayed the entire afternoon until the question of the reduction of the time allotted the Section on Diseases of Children was reached The privilege of the floor of the House was accorded Dr Isaac A Abt Chicago, who then presented to the House of Delegates the protest of the section The House of Delegates finally assigned six units to each section of the Scientific Assembly

At 5 45 the chairman called the section to order, and the following papers were read by title

"A Series of Trophoneuroses, Probably Due to Infection," by Dr Albert H Beifeld, Iowa City, Iowa

'Desensitization in the Treatment of Infantile Eczema," by Dr Thomas B Cooley, Detroit

'The Allen Treatment of Diabetes in Children," by Charles E. Hansel, South Bend, Ind

'The Method of Determining the Exact Dose of Tuberculin for the Individual Child with Pulmonary Tuberculosis, Whether that Dose be the Initial or any Subsequent Dose" by Dr Myer Solis Cohen, Philadelphia

Friday, June 8—Morning

A joint meeting was held with the Section on Nervous and Mental Diseases and the Section on Orthopedic Surgery For a report of the proceedings, see the minutes of the Section on Orthopedic Surgery

---

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Wednesday, June 6—Morning

The section was called to order by the chairman, Dr Albion W Hewlett, San Francisco, at 9 15 Dr Hewlett read the chairman's address, entitled "Cooperation Between Pharmacology and Therapeutics"

Dr Torald Sollmann, Cleveland, read a paper on "Crucial Test of Therapeutic Evidence" Discussed by Dr Samuel J Meltzer, New York

Dr Samuel J Meltzer, New York, demonstrated his apparatus for the administration of oxygen under pressure, with remarks on the efficiency of the procedure Discussed by Drs Solomon Solis-Cohen, Philadelphia, Noble P Barnes, Washington, D C, and Samuel J Meltzer, New York

Dr James E Talley, Philadelphia, read a paper on "Acidosis in Morphinism" Discussed by Drs Fred I Lackenbach, San Francisco, Torald Sollmann, Cleveland, Ernest S Bishop, New York, and James E Talley, Philadelphia

Dr Charles C Lieb, New York, read a paper on "The Action of Alcohol on the Isolated Mammalian Heart" Discussed by Drs Samuel J Meltzer, New York, Torald Sollmann, Cleveland, Solomon Solis-Cohen, Philadelphia, Walter J Wilson, Jr, Detroit, Samuel J Meltzer, New York, and Charles C Lieb, New York

Wednesday, June 6—Afternoon

Dr Walter A Bastedo, New York, read a paper on "A Discussion of Certain Measures for the Treatment of Pulmonary Edema in Pneumonia" Discussed by Drs Samuel J Meltzer, New York, Jacob Diner, New York, Walter J Wilson, Jr, Detroit, Edward F Wells, Chicago, and Walter A Bastedo, New York

The secretary, Dr Cary Eggleston, New York, read the following resolution

> The Section on Pharmacology and Therapeutics instructs its delegate to the House of Delegates that it is the sense of this section that the question of the therapeutic value of alcohol, which has been long in dispute, remains yet undetermined, and that hasty action taken under the stress of present circumstances would not be wise or as reflecting the best therapeutic and pharmacologic opinion
>
> Furthermore, while recognizing the possible need of prohibition of the use of alcohol as a measure of public safety, it would ask that the two questions be considered separately on their respective merits (See minutes, House of Delegates)

Seconded by Dr Torald Sollmann, Cleveland Discussed by Drs Samuel J Meltzer, New York, William Benham Snow, New York, R A Hatcher, New York, Walter A Bastedo, New York, and Jacob Diner, New York Motion carried

Dr Cary Eggleston, New York, read a communication from the American Pharmaceutical Association moving that the members of this delegation who are not members of the Section on Pharmacology and Therapeutics be given the privilege of the floor Motion carried

Dr R A Hatcher, New York, read the following resolution

> The pharmaceutical service in the army is unsatisfactory because it is not recognized on a modern basis, there is no pharmaceutical corps devoted to the prosecutions of pharmaceutical duties Pharmacists are compelled to enlist as privates without the hope of promotion to a commissioned rank as in the Dental and Veterinary Corps A professionally trained pharmaceutical corps could be made invaluable to the Medical Corps as assistant both in the field and in hospitals We earnestly urge the War Department to establish by congressional enactment a pharmaceutical corps with definite military standing and responsibilities. (See minutes, House of Delegates)

Discussed by Drs Torald Sollmann, Cleveland, J F Anderson, New Brunswick, N J, and Fred I Lackenbach, San Francisco

Dr Torald Sollmann, Cleveland, moved that the resolution be amended so that it be transmitted without an expression of opinion on the part of the section Amendment seconded by Dr Kirkland Motion lost

Original motion carried

The following papers were read as a symposium on "Radioactive Therapeutic Measures"

Drs Arthur Fenwick Holding and William Bayard Long New York "The Truth About the Therapeutic Value of Radioactive Methods," with lantern slides

Dr George E Pfahler, Philadelphia "The Possibilities and Limitations of Roentgenotherapy in Malignant Diseases," with lantern slides

Dr Henry K Pancoast, Philadelphia "Review of Cases of Sarcoma of the Throat and Sinuses Treated by Radium and Roentgen Rays"

Dr Curtis F Burnam, Baltimore "New Growths of the Mediastinum, with Especial Reference to Their Treatment with Radium," with lantern slides

Dr Abraham G Shortle, Albuquerque, N M "Heliotherapy in the Treatment of Tuberculosis"

These five papers were discussed by Drs William Benham Snow, New York, J A P Millet, Boston, Albert Soiland Los Angeles, C E Alhaume, Utica, N Y, George E Pfahler, Philadelphia, and Curtis F Burnam, Baltimore

Thursday, June 7—Morning

The following officers were elected chairman, Dr Arthur D Hirschfelder, Minneapolis, vice chairman, Dr Walter A Bastedo, New York, secretary, Dr Cary Eggleston, New York, delegate, Dr Albion W Hewlett, San Francisco, alternate, Dr Torald Sollmann, Cleveland

Drs Richard Weil and Russell L Cecil, New York, presented a paper on "Observations on the Excretion of Dyes" Discussed by Drs Arthur D Hirschfelder, Minneapolis, R A Hatcher, New York, Fred I Lackenbach, San Francisco, Otto Raubenheimer, Brooklyn, William Salant, Washington, D C, and Russell L Cecil, New York

Dr Walton Forest Dutton, Tulsa, Okla., read a paper on "Innovations in Intravenous Medication" Discussed by Drs Fred I Lackenbach, San Francisco, Torald Sollmann, Cleveland, Jacob Diner, New York, J F Anderson, New Brunswick, N J, Cary Eggleston, New York, Joseph L Miller, Chicago, W W Tompkins, Charleston, W Va, Otto Raubenheimer, Brooklyn, and Walton Forest Dutton, Tulsa, Okla

Dr Joseph L Miller, Chicago, read a paper on "The Nonspecificity of Vaccine Therapy" Discussed by Drs Jacob Diner, Brooklyn, John F Anderson, New Brunswick, N J, Abraham G Shortle, Albuquerque, N M, Russell L Cecil, New York, Torald Sollmann, Cleveland, Fred I Lackenbach, San Francisco, Walton Forest Dutton, Tulsa, Okla, R. G Torrey, Philadelphia, Cleon W Symonds, New York, W W Tompkins, Charleston, W Va, W A Womer, New Castle Pa, and Joseph L Miller, Chicago

Dr Newton E Wayson, Washington, D C, read a paper on "Prophylactic Use of Vaccines in the Great War" Discussed by Drs Fred I Lackenbach, San Francisco, J F Anderson, New Brunswick, N J, Herman Spitz, Nashville, Tenn, Walton F Dutton, Tulsa, Okla, Carl C Warden, Ann Arbor, Mich, and Newton E. Wayson, Washington, D C

Thursday, June 7—Afternoon

Dr Arthur D Hirschfelder, Minneapolis, read a paper on "Further Studies on the Development of Edema in Mustard Oil Conjunctivitis" Discussed by Drs Torald Sollmann, Cleveland, and Carl Voegtlin, Washington, D C.

Drs Henry F Moore and Alan M Chesney, New York presented a paper on "Ethyl Hydrocuprein (Optochin) in the Treatment of Acute Lobar Pneumonia" Discussed by Drs Arthur D Hirschfelder, Minneapolis, Rufus I Cole, New York, and Henry F Moore, New York.

Drs S Marx White and R. Edwin Morris, Minneapolis, presented a paper on "A Study of the Eggleston Method of

Administering Digitalis' Discussed by Drs Otto Raubenheimer, Brooklyn, Carl Voegtlin, Washington, D C, Harold Wilson, Detroit, Cary Eggleston, New York, and S Marx White, Minneapolis

Dr Cary Eggleston, New York, read a paper on Influence of Large Doses of Digitalis and Digitoxin on the Blood Pressures in Man" Discussed by Dr S Marx White, Minneapolis

SECTION ON PATHOLOGY AND PHYSIOLOGY

Wednesday, June 6—Morning

The section was called to order at 9 40 by the chairman, Dr James Ewing New York Dr Ewing read the chairman s address, entitled The Influence of the War on Medical Science"

Dr Dallas B Phemister, having been called to the colors, was not present to read his paper, on The Manner in Which Ossification Occurs in Different Pathologic Processes" It was directed that a minute be entered noting the cause of his absence

Dr W Landram McFarland New York, read a paper on The Pigmentation of the Hind Gut Its Clinical Significance Discussed by Drs R A Lambert, New York, Alfred F Hess New York James Ewing New York John W Draper New York J M Lynch New York and W Landram McFarland New York

Dr William Salant Washington, D C, read a paper on The Importance of Diet as a Factor in the Production of Pathologic Changes' Discussed by Dr Robert A Hatcher New York Alfred F Hess New York, and William Salant, Washington D C

Dr W M L Coplin Philadelphia read a paper on Defective Angiogenesis as a Factor in the Production of Primary Renal Aplasia Hypoplasia and Dysplasia Discussed by Drs James Ewing New York and W M L Coplin, Philadelphia.

Wednesday June 6—Afternoon

The chairman announced that in the evening at 9 o clock on the eighth floor of the Hotel Astor an examination would be held for applicants for the Aviation Corps, at which time twenty-five men would be examined, affording an opportunity to see the application of the rather unique tests required

Drs J H Black and R B McBride Dallas, Texas presented a paper on The Colloidal Gold Chlorid Test The Nature of the Solution and Its Application to Diseases of the Central Nervous System

Dr Lloyd D Felton Baltimore read a paper on Cerebrospinal Fluid and the Colloidal Gold Chlorid Test"

These two papers were discussed by Drs L H Cornwall, New York, S S Hindman Toledo Ohio, A M Moody, Chicago, J H Black Dallas Texas, and Lloyd D Felton, Baltimore

Dr Carl C Warden Ann Arbor, Mich, read a paper on The Nature of the Syphilitic Antigen No discussion

Drs P T Bohan and L A Lynch Kansas City, Mo presented a paper on A More Delicate Wassermann Reaction Depending on the Use of Larger Quantities of Blood Serum" Discussed by Drs Benjamin Gruskin Chicago, J W Smith, Jr New York S S Hindman, Chicago, James Ewing New York and L A Lynch, Kansas City, Mo

Dr Albert J Hodgson Waukesha, Wis, read a paper on Clinical Evidence of Distinct Types in the Pathology of Diabetes Mellitus' Discussed by Drs E P Joslin, Boston, and A J Hodgson Waukesha Wis

Thursday June 7—Morning

Dr Harry Dubin Philadelphia read a paper on The Relation Between Bile and Phenol Production in the Intestine" Discussed by Drs I O Palefski, New York, and Harry Dubin Philadelphia

Dr R B Gradwohl, St Louis read a paper on "A Comparison of the Chemical Findings in Blood and Spinal Fluid with Special Reference to Urea Nitrogen, Uric Acid, Creatinin and Sugar' Discussed by Drs Jerome S Leopold, New York, Ernest Bishop, New York, and R B H Gradwohl, St Louis

Dr Louis F Bishop, New York, read a paper on The Pathologic Physiology of the Heart as Revealed by the Polygraph and Electrocardiograph" No discussion

Dr W G MacCallum, New York, read a paper on An Apparatus for the Study of Dissociation of Oxyhemoglobin" No discussion

Drs Isaac Levin and B Joseph, New York, presented a paper on The Morphologic Appearance of Cancer Clinically Cured by Means of Radium and Roentgen Rays" Discussed by Drs Henry Schmitz, Chicago, Albert Woelfel, Chicago, James Ewing New York and Isaac Levin, New York

Dr Louis B Wilson Rochester Minn read a paper on Experimental Lesions in the Cervical Sympathetic Ganglions and Thyroids of Goats' Discussed by Drs S B Wolbach, Boston and Louis B Wilson, Rochester, Minn

Dr S Frederic Coonley and Stanley L Wang New York, presented a paper on The Occurrence of Tubercle Bacilli in the Breast Milk of Tuberculous Women' No discussion

Thursday, June 7—Afternoon

The following officers were elected chairman, Dr Louis B Wilson Rochester Minn vice chairman Dr Francis Carter Wood New York, secretary, Isabella C Herb, Chicago

Dr Eli Moschowitz New York read a paper entitled A Critique of Banti s Disease No discussion

Dr Edward C Rosenow Rochester Minn, read a paper on Immunologic Studies in Poliomyelitis Discussed by Drs Myer Solis Cohen Philadelphia C G Bull, New York, J M Rosenthal Philadelphia, and Edward C Rosenow, Rochester, Minn

Dr John Saliba, Elizabeth City N C, read a paper on "Ether Therapy in Surgical Infections and Its Effect on Immunity No discussion

Dr S B Wohlbach Boston read a paper on 'The Etiology and Pathology of Rocky Mountain Spotted Fever" Discussed by Drs Louis B Wilson, Rochester, Minn, and S B Wohlbach Boston

Dr William Litterer Nashville Tenn, read a paper on 'Study of the Streptothrix Isolated in Two Cases of Rat-Bite Fever' No discussion

Friday, June 8—Morning

A joint meeting was held with the Section on Surgery, General and Abdominal For a report of the proceedings, see the minutes of that section

SECTION ON STOMATOLOGY

Wednesday, June 6—Morning

The meeting was called to order at 9 45 a m by the chairman Dr Arthur D Black, Chicago

The following papers were read as a symposium on 'The Principles Involved in Chronic Mouth Infections in Their Relation to General Diseases

Dr Arthur D Black, Chicago 'Roentgenographic and Microscopic Studies of the Tissues Involved in Chronic Mouth Infections" (Chairman's Address)

Discussed by Drs T L Gilmer Chicago, G O Mills, New York John E Nyman, Chicago, E T R Rhein, New York, Arthur Zentler New York, Augustus S Dowling, and Louis Goldstine New York

Dr Kurt H Thoma, Boston "Chronic Diseases of the Mouth of Interest to both Physician and Dentist"

Meyer L Rhein, New York The Retention of Devitalized Teeth Without Danger of Focal Infection"

These two papers were discussed by Drs G O Mills, New York, Morris I Schamberg, New York, T W Brophy, Chicago, Louis Goldstine, New York, Frederick B Moorehead Chicago, Arthur Zentler New York, Meyer L Rhein, New York, Kurt H Thoma, Boston, and Arthur D Black, Chicago

Dr William C Fisher, New York, proposed the following resolution, which was carried

To the House of Delegates The following resolutions were passed by the Section on Stomatology and were recommended to your body for favorable consideration

Resolved, That applicants for associate fellowship in the American Medical Association holding the degree of D D S or its equivalent and members of their local county or state dental organizations before their application is approved by the section must be considered by the executive committee of the section and must be endorsed by at least two members of this executive committee as having attained to a position in the dental profession, either by virtue of original research work done or some meritorious service rendered to the profession or public which shall, in the judgment of these members of the executive committee of the section, warrant favorable action on the application (See minutes, House of Delegates)

Wednesday, June 6—Afternoon

The meeting was called to order at 2 p m by the chairman, Dr Arthur D Black, Chicago

The following officers were elected chairman, Dr Frederick B Noyes, Chicago, vice chairman, Dr Henry S Dunning, New York, secretary, Dr Eugene S Talbot, Chicago, delegate, Dr William C Fisher, New York, Executive Committee, Thomas L Gilmer, Chicago, and Frederick B Moorehead, Chicago

The secretary, Dr E E. S Talbot, Chicago, presented a number of applications for membership which were referred to the Executive Committee for investigation and report

The secretary was directed to forward a letter of good wishes to Vice Chairman Henry S Dunning, in France.

The following papers were read as a symposium on "Cancer of the Oral Cavity"

Dr L Duncan Bulkley, New York "Epithelioma or Cancer of the Oral Cavity"

Drs John W Bransfield and George M Dorrance, Philadelphia 'Treatment of Cancer of the Mouth by Electrical Cautery, With or Without Operative Measures"

These two papers were discussed by Drs Joseph C Bloodgood, Baltimore, Morris I Schamberg, New York, Vilray P Blair, St Louis, Louis C LeRoy, New York, M C Smith, Lynn, Mass , Thomas L Gilmer, Chicago, Frederick B Moorehead, Chicago, L Duncan Bulkley, New York, George M Dorrance, Philadelphia, and Arthur D Black, Chicago

Dr Joseph M Levy, New York, read a paper on "Preliminary Report of Investigations as to the Frequency of Metastatic Eye Infections from Primary Dental Foci" Discussed by Drs Meyer L Rhein, New York, Morris I Schamberg, New York, James Kelsey, Erie, Pa , G V I Brown, Milwaukee, Wis, and Joseph M Levy, New York.

Thursday, June 7—Afternoon

Dr John B Roberts, Philadelphia, read a paper on "A *Composite Osteoplastic* Closure of Clefts of the Hard Palate" Discussed by Drs George V I Brown, Milwaukee, Wis , T W Brophy, Chicago, and John B Roberts, Philadelphia

Dr Morris I Schamberg, New York, read a paper on "Bone Surgery as Applied to the Jaws, with Special Reference to Bone Regeneration"

Dr T W Brophy, Chicago, introduced a patient with cleft palate

Dr George V I Brown, Milwaukee, Wis, read a paper on "A New Operation for the Immediate Surgical Separation of the Superior Maxillary Bones to Widen the Nares for the Improvement of Respiratory and Other Conditions"

These two papers were discussed by Drs *John B Roberts,* Philadelphia, F L Stanton, New York, R E Mercer, New York, T W Brophy, Chicago, and George V I Brown, Milwaukee, Wis

Dr W Wayne Babcock, Philadelphia, read a paper on "'Soup Bone' Implants for the Correction of Defects of the Skull and Face" Discussed by Drs George V I Brown, Milwaukee, Wis , T W Brophy, Chicago, W J Younger, Paris, C B Cortright, Brooklyn, Morris I Schamberg, New York, and W Wayne Babcock, Philadelphia

Dr William C Fisher reported the adoption by the House of Delegates of the resolution passed by the section on the preceding day

SECTION ON NERVOUS AND MENTAL DISEASES

Wednesday, June 6—Morning

The meeting was called to order by the chairman, Dr Bernard Sachs, New York.

Dr Bernard Sachs, New York, read the chairman's address, entitled "The Truth About Intraspinal Injections in the Treatment of Syphilis of the Nervous System"

Dr Bernard Sachs, chairman, said that it seemed advisable to the section yesterday, in the report to the Council of Scientific Assembly, that among other sections, the neurologic section was to be reduced to three units in any given meeting, and not to exceed six papers in any given unit Dr Sachs said the reduction from five units to three would materially restrict the program He would ask that a resolution be drawn up to be presented at the next meeting

Dr C R. Ball, St. Paul, moved that an energetic protest be made against reduction of the section to three units

Dr C F MacDonald, New York, seconded this motion, which was unanimously carried after being discussed by Dr G A Moleen, Denver, and Dr Bernard Sachs, New York

Dr C R Ball moved that a committee of five be appointed to draw up an energetic protest to present to the House of Delegates against any reduction of the units of the section This motion was carried after being discussed by Dr W A Jones, Minneapolis, Dr Bernard Sachs, New York, Dr A L Skoog, Kansas City, Mo, and Dr Woodson, Cincinnati

The chairman then appointed a committee consisting of Dr J Ramsay Hunt, New York, Dr *C R Ball, St Paul,* Dr Peter Bassoe, Chicago, Dr H T Patrick, Chicago, and Dr Adolf Meyer, Baltimore, to draw up a protest to present to the House of Delegates (Communication not received by House of Delegates)

Dr Pearce Bailey, New York, addressed the meeting on the subject of "Neurologic and Psychiatric Units for Army and Navy Hygiene" Dr W I Wolfstein, Cincinnati, suggested the advisability of distributing literature to the section on the subject

Dr Adolf Meyer, Baltimore, read a paper on "Progress in Psychiatric Teaching" Discussed by Drs Ernest Zueblin, Cincinnati, Tom A Williams, Washington, D C, and Adolf Meyer, Baltimore

Dr Owen Copp, Philadelphia, read a paper on "State Organization for Mental Hygiene." Discussed by Drs Adolf Meyer, Baltimore, E E Mayer, Pittsburgh, and Leo M Crafts, Minneapolis

A joint meeting was held with the Section on Obstetrics, Gynecology and Abdominal Surgery For a report of the proceedings, see the minutes of that section

Wednesday, June 6—Afternoon

Dr David I Wolfstein, Cincinnati, read a paper on "Hysterical Lethargy" Discussed by Drs H T Patrick, Chicago, T Diller, Pittsburgh, Joseph Collins, *New York,* D S Booth, St Louis, Tom A Williams, *Washington, D C ,* Charles W Kidder, Woodstock, Vt , H I *Gosline, Trenton,* N J, and David I Wolfstein, Cincinnati

Dr Francis R Fry, St Louis, read a paper on "*The* Neurasthenic at the Threshold"

Dr Theodore Diller, Pittsburgh, read a paper entitled "The Psychoneuroses How Shall We Look on Them *Today?*"

Dr Edward E. Mayer, Pittsburgh, read a paper *on* "*The* Medicolegal Problems of the Traumatic Neuroses"

These three papers were discussed by Drs H T Patrick, Chicago, D S Booth, St Louis, Alfred Gordon, Philadelphia, A W Ives, Detroit, D I *Wolfstein,* Cincinnati, Tom A. Williams, Washington, D C; A. L. Skoog, Kansas City, Mo , C R Woodbury, Clifton Springs, N Y, C Woodson, Cincinnati, Bernard Sachs, New York, Theodore Diller, Pittsburgh, and E. E. *Mayer,* Pittsburgh.

Dr Alfred Gordon, Philadelphia, read a paper on "Psychoses Other than Paretic Dementia *in* Syphilitic Individuals" Discussed by Drs E E Mayer, Pittsburgh, C Woodson, Cincinnati, C R Ball, St. Paul, and Alfred Gordon, Philadelphia

THURSDAY, JUNE 7—MORNING

Dr Leo M Crafts, Minneapolis, read a paper on "The Early Recognition of Multiple Sclerosis, with Report of Twelve Cases" Discussed by Drs A L Skoog, Kansas City, E E Mayer, Pittsburgh, C R Ball, St Paul, D I Wolfstein, Cincinnati G A Moleen, Denver, Bernard Sachs, New York, I R Starkey, Detroit, Hayes Woods, Canton, China, E D Fisher New York, and L M Crafts, Minneapolis

Dr George Wilson, Philadelphia read a paper on "Progressive Muscular Atrophy Charcot-Marie-Tooth Type" Discussed by Drs Bernard Sachs, New York, W A Jones, Minneapolis, and Peter Bassoe, Chicago

Dr Simon P Goodhart, New York, read a paper on "Metabolism of Muscular Dystrophy" Discussed by Drs Janney, New York, and Leo M Crafts Minneapolis

Dr Edward D Fisher, New York, read a paper on "Report of a Case of Syringomyelia with Operation The Difference Between It and Amyotrophic Lateral Sclerosis" Discussed by Drs M Neustaedter, New York, Isador Abrahamson, New York, and E D Fisher, New York

Dr Nathaniel S Yawger Philadelphia read a paper on "Familial Head Nystagmus in Four Generations Associated with Ocular Nystagmus" Discussed by Dr Isador Abrahamson New York

THURSDAY, JUNE 7—AFTERNOON

The following officers were elected chairman, Dr Charles Eugene Riggs, St Paul, vice chairman Dr Charles W Hitchcock Detroit, delegate, G A Moleen, Denver, alternate, C R Ball St Paul

Dr Andrew L Skoog, Kansas City, Mo, read a paper on "Cerebrospinal Fluid Pressure" Discussed by Drs William A Leszynsky, New York, and Andrew L Skoog Kansas City Mo

Dr George W Hall Chicago read a paper on "Organic Changes in the Central Nervous System Due to Probable Focal Infections" Discussed by Dr H T Patrick, Chicago, Munro, North Carolina and George W Hall Chicago

Dr Israel Strauss, New York, read a paper on "Sciatica and Its Treatment." Discussed by Drs William Leszynsky, New York C R Ball St. Paul, H T Pershing Denver, Tom Williams Washington, D C, D I Wolfstein Cincinnati, H. T Patrick, Chicago, and Israel Strauss New York.

Drs Isador Abrahamson and Hyman Climenko New York, presented a paper on "Pituitary Disease Study of One Hundred Cases" Discussed by Drs Walter Timme, New York, D I Wolfstein, Cincinnati, and Isador Abrahamson, New York.

Drs Marcus Neustaedter and E. Banzhaf, New York, presented a paper on "The Antipoliomyelitis Horse Serum." No discussion

Dr Howell T Pershing, Denver, read a paper on "Persistent Treatment of Epilepsy" Discussed by Drs L P Clark, New York W J Dawson, Eldridge Calif, W H. Kidder, Oswego N Y, N Pashayan Schnectady, N Y Leo M Crafts Minneapolis, E. D Fisher, New York, and Howell T Pershing Denver

The following resolution was passed

> The members of the Section on Nervous and Mental Diseases wish to express themselves as strongly opposed to any curtailment of the official time which has heretofore been allotted for the work of the section.
>
> It is believed that this section by reason of the scope and diversity of subjects represented is second only in importance to the Section on the Practice of Medicine and the Section on Surgery It includes not only the large field of nervous diseases and psychiatry, but also the special developments of neuropathy psychopathology and neurologic surgery It is also concerned with many essential problems, such as mental hygiene and mental defectives, criminal psychology and other subjects of great economic importance.
>
> Furthermore we would emphasize the fact that there is never any dearth of material for presentation at the meetings of this section indeed it is frequently necessary because of the limitations of the program to refuse meritorious papers.
>
> If however for editorial reasons it should be deemed advisable to select only certain papers from the program for publication in THE JOURNAL the members of this section would acquiesce very cordially in any such revision
>
> If the time heretofore allotted to the Section on Nervous and Mental Diseases should be curtailed, in spite of the earnest protest of its members, it would then become necessary to form an additional section in order to meet the requirements of this important field
>
> We believe that such a division would be unfortunate and that all subjects relative to the nervous system should receive consideration under the one head [Not transmitted to House of Delegates]

FRIDAY, JUNE 8—MORNING

A joint meeting was held with the Section on Diseases of Children and the Section on Orthopedic Surgery For the proceedings see the minutes of the Section on Orthopedic Surgery

---

SECTION ON DERMATOLOGY

WEDNESDAY, JUNE 6—MORNING

The meeting was called to order at 9 15 a m. by the chairman Dr Henry R Varney Detroit

Dr Henry R Varney Detroit read the chairman's address entitled "The Hospital Opportunities and Responsibilities for the Syphilitic"

The following papers were read as a symposium on "The Economic Importance and Teaching of Syphilis"

Dr John A Fordyce, New York "The Teaching of Syphilis"

Dr C Morton Smith Boston "The Teaching of Syphilis"

Dr Walter J Heimann, New York "The Teaching of Syphilis"

Dr Henry H Hazen Washington, D C, read an abstract prepared by Major Mathew A Reasoner of points which were to have been covered in the promised joint paper by Major Henry J Nichols, Fort Bliss, Texas and Major Mathew A Reasoner, Washington, D C, entitled "The Economic Importance of Syphilis"

These three papers and the abstract were discussed by Drs Harry G Irvine Minneapolis, Augustus Ravogli, Cincinnati Frank Edward Simpson Chicago, Thomas W Murrell, Richmond Va., Jay F Schamberg Philadelphia, Harold N Cole Cleveland James Herbert Mitchell, Chicago, Isadore Rosen New York Franklin W Cregor, Indianapolis, John H Stokes Rochester, Minn, Boleslaw Lapowski, New York, John A. Fordyce, New York, C Morton Smith, Boston, and Walter J Heimann, New York.

Drs. Jay Frank Schamberg, John A. Kolmer and George W Raiziss, Philadelphia, presented a paper on "A Study of the Manner in Which Mercury Is Absorbed When Administered by Inunction" Discussed by Drs Boleslaw Lapowski New York, William A Pusey, Chicago, and Jay Frank Schamberg, Philadelphia

Dr Henry H. Hazen, Washington, D C, made an explanatory statement in relation to steps to abrogate the United States patents on salvarsan Dr Jay Frank Schamberg Philadelphia, explained action taken by the United States government in 1862 with reference to enemy patents On motion the subject was passed for consideration at the afternoon session.

The chairman appointed the following Nominating Committee Drs F G Harris, Chicago, George M. MacKee New York, and Howard Morrow, San Francisco

WEDNESDAY, JUNE 6—AFTERNOON

The following officers were elected chairman, Dr Henry H Hazen, Washington, D C., vice chairman, Dr Ernest Dwight Chipman, San Francisco, secretary, Dr Walter J Heimann, New York.

The question of the abrogation of the United States patent on salvarsan, laid over during the forenoon, was discussed by Drs C Augustus Simpson, Washington, D C., Henry H Hazen, Washington, D C., Sigmund Pollitzer, New York, and William A. Pusey, Chicago On motion of Dr C Augustus Simpson (amended by Dr William A. Pusey) the following resolution was passed

> *Resolved* That it is the sense of the Section on Dermatology of The American Medical Association which is representative of the American medical profession in the treatment of syphilis that the United States patents on salvarsan be abrogated (Not transmitted to House of Delegates.)

The following papers were read as a symposium on "Neoplasms"

Dr J Frank Fraser, New York "Mycosis Fungoides A Study of Seven Cases"

Dr Harold N Cole, Cleveland "The Skin Changes in Hodgkin's Disease"

Dr Fred Wise, New York "Lymphadenosis Cutis Universalis, Associated with Generalized Erythrodermia and Atrophy of the Skin"

These three papers were discussed by Drs Henry H Hazen, Washington, D C, Adam Kemble, Washington, D C, Sigmund Pollitzer, New York, and Walter J Heimann, New York

Dr Samuel E Sweitzer, Minneapolis, read a paper on "An Analysis of Forty-One Cases of Skin Cancer" Discussed by Drs Fred Wise, New York, Everett S Lain, Oklahoma City, Walter J Heimann, New York, Shepherd, J C Bateson, Scranton, Pa, F G Harris, Chicago, Harold N Cole, Cleveland, L B Mount, Albany, N Y, James M King, Nashville, Tenn, Franklin W Cregor, Indianapolis, Henry H Hazen, Washington, D C, and Compton, Washington, D C

Drs Joseph Zeisler and Erwin Paul Zeisler, Chicago, presented a paper on "Primary Nonpigmented Sarcoma of the Skin" Discussed by Dr George M MacKee, New York

Dr Augustus Ravogli, Cincinnati, read a paper on "Clinical Considerations on Epidermolysis Bullosa" Discussed by Drs Harold N Cole, Cleveland, Shepherd, William A Pusey, Chicago, Frank E Simpson, Chicago, and Augustus Ravogli, Cincinnati

Thursday, June 7—Forenoon

The supplemental report of the Nominating Committee was presented, and Dr Sigmund Pollitzer, New York, was elected delegate and Dr John A Fordyce, New York, alternate

Dr Howard Morrow, San Francisco, read a paper on "The Treatment of Impetigo Contagiosa" Discussed by Drs John E Lane, New Haven, Conn, W C Brownson, Asheville, N C, McConnell, New York, Samuel E Sweitzer, Minneapolis, Everett S Lain, Oklahoma City, and Harold N Cole, Cleveland

Dr George Manghill Olson, Minneapolis, read a paper on "Argyria Localis Due to Organic Silver Preparations" Discussed by Drs William A Pusey, Chicago, and William B Trimble, New York

Dr C Augustus Simpson, Washington, D C, read a paper on "Primrose Dermatitis Its Relationship to Anaphylaxis" Discussed by Dr Philip Kilroy, Springfield, Mass, Walter J Heimann, New York, and William A Pusey, Chicago

Dr John E Lane, New Haven, Conn, read a paper on "Perleche" Discussed by Drs Harold N Cole, Cleveland, William A Pusey, Chicago, Philip Kilroy, Springfield, Mass, George Manghill Oleson, Minneapolis, and W C Brownson, Asheville, N C

On motion of Dr F G Harris, Chicago, the following resolution was adopted unanimously by rising vote

> *Resolved,* That a vote of thanks be given to the local clinical committee expressing our appreciation of their excellent clinic and their other cordial hospitalities

On behalf of the local clinical committee, Dr Walter J Heimann made graceful acknowledgment, in the absence, as he said, of Dr Howard Fox

The newly elected chairman and secretary were inducted into office, and after their brief speeches of acceptance, the section adjourned

---

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Wednesday, June 6—Morning

The meeting was called to order at 9 25 by the chairman, Dr Otto P Geier, Cincinnati

In the absence of Dr A M Harvey Chicago, secretary, the chairman under authority conferred by motion, duly passed, appointed Dr D B Lowe, Akron, Ohio, temporary secretary

Dr Otto P Geier read the chairman's address, entitled "Adequate Medical Service of the Future" Discussed by Mr Lee K Frankel, New York, and Dr Joseph Goldberger, Washington, D C

Dr Henry M Bracken, Minneapolis, read and moved the adoption of the following resolutions

> Whereas, Preventive medicine is of growing importance,
>
> Whereas, The Section on Preventive Medicine and Public Health of the American Medical Association brings men who are interested more especially in public health work to its meetings, and
>
> Whereas, The treatment of special subjects relating to preventive medicine requires concentration as to time, therefore, be it
>
> *Resolved,* That the Section on Preventive Medicine and Public Health, through its representatives in the House of Delegates, hereby requests that its work at the annual sessions of the American Medical Association be extended to six units, and that it be permitted to hold its meetings each day until the work is completed (See minutes, House of Delegates)

Dr W S Rankin, Raleigh, N C, seconded the motion, Dr William C Rucker, Washington, D C, offered an amendment that a committee of three be appointed to present the resolutions before the House of Delegates, the resolutions with the proposed amendment were favorably discussed by Drs S S Goldwater, New York, Haven Emerson, New York, and Otto P Geier, Cincinnati, and adopted, whereupon the chairman appointed as such committee Drs Bracken, Rankin and Rucker

Dr W S Rankin, Raleigh, N C, read a paper on 'The New Public Health" Discussed by Drs Henry M Bracken, Minneapolis, William C Rucker, Washington, D C, and Arthur T McCormack, Bowling Green, Ky

Dr David L Edsall, Boston, read a paper on "The Diagnostic Clinic as a Factor in Higher Standards of Medical Practice" Discussed by Drs Otto P Geier, Cincinnati, Roger S Morris, Cincinnati, Robert Pollock, San Diego, Calif, and Mr S I Dublin, New York

The paper of Dr Sidney M McCurdy, Youngstown, Ohio, on The Industrial Dispensary as a Contribution to Public Health" was read by Dr William C Rucker, Washington, D C Discussed by Dr George M Kober, Washington, D C

Dr John Newell Hurty, Indianapolis, read a paper on 'The All-Day School Dispensary in the Prevention of Disease" Discussed by Drs Taliaferro Clark, Washington, D C, J C Palmer, Syracuse, N Y, Herman N Bundesen, Chicago, John Newell Hurty, Indianapolis, and Otto P Geier Cincinnati

Wednesday, June 6—Afternoon

The meeting was called to order at about 2 15 by the chairman, Dr Otto P Geier, Cincinnati

The chairman appointed Drs Henry M Bracken, Minneapolis, C E Ford, New York, and B S Warren, Washington, D C, a nominating committee, to report on Thursday

Prof Irving Fisher, New Haven, Conn, delivered an address on The Need for Compulsory Health Insurance" Discussed by Drs Herbert J Cronin, Cambridge, Mass, and E F Cody, New Bedford, Mass

Mr Frederick L Hoffman, Newark, N J, read a paper on 'Facts and Fallacies of Compulsory Sickness Insurance" Discussed by Drs Eden V Delphey, New York, Aaron Grover Baldwin, East Orange, N J, L W Zwisohn, New York, and George W Everson, Brooklyn

The paper of Mr M W Alexander, West Lynn, Mass, on "The Industrial Aspect" was read by Dr C D Shelby, Toledo, Ohio Discussed by Dr Henry W Berg, New York

These three papers were then discussed by Drs Gordon A Bates, Toronto, Canada, and William S Gottheil New York, the latter moving the adoption of the following resolution

> *Resolved,* That after full discussion and careful consideration of the subject the Section on Preventive Medicine and Public Health of the American Medical Association hereby instructs its delegate to the House of Delegates of the American Medical Association to oppose the scheme for compulsory health insurance in every way possible

Seconded Discussed by Drs L I Harris, New York, Otto P Geier, Cincinnati, Henry M Bracken, Minneapolis

A motion by Dr Otto P Geier, Cincinnati, to amend by add tion of the words "We protest against the ill considered action of the House of Delegates in approving the health insurance bill at this time, and that they be asked to reconsider their action, and postpone action until further study," seconded by Dr Eden V Delphey, New York and discussed by Drs Edward L Spitzer, New York, B S Warren, Washington, D C Henry W Berg, New York, Henry M Bracken, Minneapolis and others, was lost, whereupon the original motion and the general subject were discussed by Drs John P Davin and L I Harris, New York, M L Harris, Chicago, Henry W Berg, New York, G W Schereschewsky, Pittsburgh, Eden V Delphey, New York, Edward L Spitzer, New York, B S Warren, Washington, D C, and W S Rankin, Raleigh, N C A motion to table was lost by a vote of 20 ayes to 24 noes and the original motion on the resolution as read was adopted

Thursday, June 7—Morning

The meeting was called to order at 9 35 by the chairman Dr Otto P Geier, Cincinnati.

Dr Franklin H Martin Chicago, read a paper on Preparations for Public Health During War" Discussed by Col H J Goodwin, British Army, Drs Otto P Geier Cincinnati, William C Rucker Washington, D C, John F Nagle, New York, S W Welch Montgomery, Ala, H C Coe, New York, and Herman N Bundesen, Chicago

Dr W Irving Clark, Jr, Worcester, Mass, read a paper on "The Protection of the Health of the Worker in War"

The following officers were elected chairman, Dr W S Rankin Raleigh, N C, vice chairman, Dr Haven Emerson New York, secretary (for three years), Dr Don B Lowe, Akron Ohio, delegate, Dr Otto P Geier Cincinnati, alternate Dr C St Clair Drake, Springfield Ill Executive Committee Drs. Otto P Geier, Cincinnati, William C Rucker, Washington, D C, and C Hampson Jones Baltimore.

Dr H C Coe, New York read a paper on 'The Medical Student as a Medicomilitary Cadet'

Dr W S Rankin Raleigh, N C, offered the following resolution

> Whereas, The protection of the national health is a matter of paramount importance particularly at the present time and
>
> Whereas To accomplish this it is necessary that there be a close communication of all health agencies of the nation the states and the municipalities therefore be it
>
> *Resolved* That the Section on Preventive Medicine and Public Health urges the House of Delegates to memorialize Congress, to the end that Senate Joint Resolution No 63 be speedily enacted into law (See minutes, House of Delegates.)

Seconded and adopted

The paper by Dr H C. Coe was discussed by Drs David L Edsall, Boston, and Francis E. Fronczak Buffalo

The paper by Dr W Irving Clark, Jr, was discussed by Drs John R. Williams, Rochester, N Y, David L. Edsall, Boston T R. Crowder, Chicago, G W Schereschewsky, Pittsburgh, Oscar F Dowling, New Orleans, Herbert J Cronin Cambridge Mass, R W Corwin, Pueblo Colo, W Irving Clark Jr, Worcester, Mass and Otto P Geier Cincinnati

Thursday, June 7—Afternoon

The meeting was called to order at 2 15 by the chairman, Dr Otto P Geier Cincinnati

Dr W W Peter, Shanghai, China, read a paper on Some Aspects of the Public Health in China." Discussed by Drs F J Tooker, China and New York, Rowland G Freeman, New York, Haven Emerson, New York, N W Brown, Nanking China, and W W Peter, Shanghai China

Dr D B Armstrong Framingham, Mass., read a paper on 'Community Health and Tuberculosis Demonstration" Discussed by Drs S Adolphus Knopf New York, D B Armstrong Framingham, Mass, Morris Hirschberg, New York, and Haven Emerson, New York.

Dr A. F Hess, New York, read a paper on "Prophylactic Therapy of Rickets in a Negro Community" Discussed by Drs Haven Emerson New York, J Sobel, New York, and A F Hess, New York.

Dr Haven Emerson, New York, moved the adoption of the following resolution

> Having heard the report of the beginnings of a public health education movement in China initiated by the National Medical Association the China Medical Missionary Association and the Young Men's Christian Association be it
>
> *Resolved* By the Section on Preventive Medicine and Public Health that this section expresses its sympathetic interest in the joint activities of these bodies and a hope that their work will stimulate the Chinese people to the task of conserving their national health [Not transmitted to House of Delegates]

Seconded and carried

Dr R W Corwin Pueblo Colo, read a paper on "Health Preparedness in Time of Peace or When in Health" No discussion

Dr J H Mason Knox Baltimore, read a paper on 'The Place of Infant Welfare in an Institution of Hygiene" Discussed by Drs William Welch, Baltimore, William T Chapin New York, Rowland G Freeman, New York, A F Hess, New York, and J H Mason Knox, Baltimore

SECTION ON GENITO-URINARY DISEASES

Wednesday, June 6—Morning

The meeting was called to order by the vice chairman, Dr Carl L. Wheeler, Lexington, Ky, at 9 30

Drs Frederick W Robbins and Frank C Seabury, Detroit presented a paper on the Treatment of Chancroids" Discussed by Drs Noah E Aronstam Detroit, Herman L Kretschmer Chicago, Charles W Bethune, Buffalo, B S Barringer New York J L. Boogher, St Louis, G G Smith Boston, Irwin E Colgin, Waco, Texas, and Frederick W Robbins Detroit

Dr Anton G Rytina Baltimore read a paper on 'Clinical Consideration of Verumontanum Diseases Based on Histopathology' Discussed by Drs C M Harpster Toledo, J B Cross Buffalo, O S Lowsley New York, Leo Buerger, New York, Theodore Baker Pittsburgh R H Herbst, Chicago, and Anton G Rytina, Baltimore

Dr Eugene Fuller, New York read a paper on 'External Urethrotomy and Seminal Vesiculotomy Combined in a Single Operative Procedure' Discussed by Drs L O Smith Cincinnati, R. H Gibbons, New York and Eugene Fuller, New York

Dr Edward G Ballenger, Atlanta, Ga, showed moving pictures of various genito urinary operations and procedures

Wednesday, June 6—Afternoon

Dr George G Smith, Boston, read a paper on "Bladder Disturbances Due to Nerve Lesions" Discussed by Drs W C Quinby, Boston Bransford Lewis St Louis, John T Geraghty Baltimore J L Boogher St Louis, Martin Krotoszyner, San Francisco, W F Braasch, Rochester, Minn Edward L Keyes, Jr, New York, Charles W Bethune, Buffalo Winfield Ayres, New York, and George C Smith, Boston

• Dr Bransford Lewis, St Louis read a paper on "Vesical Diverticula Operation in Two Cases, with Remarks on Technic"

Dr John T Geraghty, Baltimore, read a paper on "A Study of the Results of Treatment of Various Types of Bladder Tumors"

Dr Benjamin S Barringer New York read a paper on "Radium Treatment of Bladder and Prostatic Carcinoma"

These three papers were discussed by Drs Edward L. Keyes, Jr New York, W F Braasch, Rochester, Minn, G G Smith, Boston, Leo Buerger, New York, Martin Krotoszyner, San Francisco, W C Quinby, Boston, Bransford Lewis, St. Louis, John T Geraghty, Baltimore, and B S Barringer, New York.

Thursday, June 7—Morning

The secretary read the resolution adopted by the House of Delegates in regard to the number of units for each section He said he did not think, from his experience while secretary, that three units, with a maximum of eighteen papers, would be sufficient, and he felt that there should be at least four units

Dr H A Fowler, Washington, D C, offered the following resolution

> Believing that the action recently taken by the House of Delegates whereby the number of units of the program of the Section on Genito Urinary Diseases has been reduced to three is insufficient for the needs of the section, the members of the section emphatically protest against such action, and request that the minimum number of units be not less than four

The resolution was adopted

The following nominating committee was appointed Dr Herman L Kretschmer, Chicago, chairman, Dr G G Smith, Boston, and Dr H G Bugbee, New York

Dr Harry A Fowler, Washington, D C, read a paper on 'Syphilis of the Bladder" Discussed by Drs Martin Krotoszyner, San Francisco, G G Smith, Boston, Charles J Watterston, Birmingham, Ala, and Harry A Fowler, Washington, D C

The following papers were read as a symposium on 'Roentgenographic and Clinical Diagnosis of Lithiasis in the Urinary Tract"

Dr Eugene W Caldwell, New York "Review of a Series of Roentgenographic Examinations of the Urinary Tract"

Dr Leon T Lewald, New York "The Differential Diagnosis of Lesions of the Urinary Tract from Those of the Gastro-Intestinal Tract, with Special Reference to Concretions in the Appendix"

Dr Edward L Young, Jr, Boston "The Clinical Diagnosis of Lithiasis of the Urinary Tract"

Dr Henry G Bugbee, New York "Clinical Study of Lithiasis Based on a Series of One Hundred and Ninety-Eight Cases"

These four papers were discussed by Drs Henry K Pancoast, Philadelphia, W F Braasch, Rochester, Minn, H L Kretschmer, Chicago, Abraham Hyman, New York, James W Hunter, Norfolk, Va, H A Fowler, Washington, D C, G G Smith, Boston, A M Wose, Syracuse, N Y, V D Lespinasse, Chicago, B S Barringer, New York, J E Burns, Baltimore, A J Crowell, Charlotte, N C, C M Harpster, Toledo, and Edward L Young, Boston

The following officers were elected chairman, Dr Edward L Keyes, Jr, New York, vice chairman, Dr Martin Krotoszyner, San Francisco, secretary, Dr W F Braasch, Rochester, Minn, delegate, Dr E O Smith, Cincinnati, alternate, Dr Oliver Lyons, Denver

Thursday, June 7—Afternoon

Dr Martin Krotoszyner, San Francisco, read a paper on "The Intravenous Phlorizin Test"

Drs Benjamin A Thomas and Joseph C Birdsall, Philadelphia, presented a paper on "Comparative Results of a Number of Functional Kidney Tests on a Series of Patients"

These two papers were discussed by Drs Robert H Greene, New York, B S Barringer, New York, Abraham Hyman, New York, W F Braasch, Rochester, Minn, A G Rytina, Baltimore, H L Kretschmer, Chicago, George W Stark, Syracuse, N Y, John T Geraghty, Baltimore, Martin Krotoszyner, San Francisco, and Benjamin A Thomas, Philadelphia

Dr Herman L Kretschmer, Chicago, read a paper on "The Value of Making a Routine Leukocyte Count on the Urine in Infections of the Higher Urinary Tract" Discussed by Drs Martin Krotoszyner, San Francisco, W C Quinby, Boston, and George A Wyeth, New York

Dr Abraham Hyman, New York, read a paper on "Surgical Diseases of the Urinary Tract in Children" Discussed by Drs Leo Buerger, New York, H L Kretschmer, Chicago, Martin Krotoszyner, San Francisco, C G Bandler, New York, and Abraham Hyman, New York.

Dr Charles E Barnett, Fort Wayne, Ind, read a paper on "Polycystic Kidney" Discussed by Drs Robert C Bryan, Richmond, Va, A J Crowell, Charlotte, N C, A G Rytina, Baltimore, B A Thomas, Philadelphia, O S Lowsley, New York, Martin Krotoszyner, San Francisco, John H Cunningham, Jr, Boston, Herman L Kretschmer, Chicago, and Charles E Barnett, Fort Wayne, Ind

SECTION ON ORTHOPEDIC SURGERY

Wednesday, June 6—Morning

The meeting was called to order by the chairman Dr Edwin W Ryerson, Chicago, at 9 30 a m Dr Ryerson read the chairman's address entitled, "The Care of Cripples as a Problem for Each Individual State." No discussion

Dr Wallace Blanchard, Chicago, read a paper on "Treated and Untreated Osteochondritis of the Hip" Discussed by Drs John Joseph Nutt, New York, Percy W Roberts, New York, Frederick J Gaenslen, Milwaukee, Wis, Samuel C Baldwin, Salt Lake City, James W Sever, Boston, Emil S Geist, Minneapolis, and Wallace Blanchard, Chicago

Dr John Joseph Nutt, New York, read a paper on "Neurotization of Paralyzed Muscle A Clinical and Laboratory Study," with a lantern demonstration by Dr Frank J Fraser, New York Discussed by Drs Arthur Steindler, Iowa City, Iowa, Walter Truslow, Brooklyn, Carl H Bucholz, Boston, Henry Keller, New York, James W Sever, Boston, Reginald H Sayre, New York, H W Frauenthal, New York, W C Campbell, Memphis, Tenn, and John Joseph Nutt, New York

Dr Carl H Bucholz, Boston, read a paper on "The Lame and Stiff Shoulder" Discussed by Drs Walter Truslow, Brooklyn, Walter M Brickner, New York, Wallace Blanchard, Chicago, Melvin S Henderson, Rochester Minn, E D Oppenheimer, New York, R O Meisenbach, Buffalo, and Carl H Bucholz, Boston

Dr Henry B Thomas, Chicago, read a paper on "Arthritis and Foreign Protein" Discussed by Drs Walter G Stern, Cleveland, R O Meisenbach, Buffalo, and Henry B Thomas, Chicago

Dr Horace R Allen, Indianapolis, read a paper on 'Fractures" Discussed by Drs Robert E Farr, Minneapolis, J D Griffith, Kansas City, Edwin W Ryerson, Chicago, Joseph E Root, Hartford, Conn, John Ridlon, Chicago, Albert H Freiberg, Cincinnati, Henry Keller, New York, Roland Hammond, Providence, R I, A A Crane, Waterbury, Conn, Eugene A McCarthy, Fall River, Mass, Samuel C Baldwin, Salt Lake City, Melvin S Henderson Rochester, Minn, J D Griffith, Kansas City, Mo, R O Meisenbach, Buffalo, and Horace R Allen, Indianapolis

Wednesday, June 6—Afternoon

The following papers were presented as a symposium on "Poliomyelitis"

Dr Charles Ogilvy, New York "Study of a Group of One Hundred and Ten Cases of Poliomyelitis, from the Acute Attack to the Present Time"

Dr E D Ebright, Coney Island, N Y "The Orthopedic Treatment of Acute and Convalescent Poliomyelitis"

Dr Samuel W Boorstein, New York "The Treatment of Anterior Poliomyelitis at Fordham Hospital"

These three papers were discussed by Drs Charlton Wallace, New York, Walter Truslow, Brooklyn, Henry B Thomas, Chicago, Willis C Campbell, Memphis, Tenn, J D Griffith, Kansas City, Mo, Walter G Stern, Cleveland, J H Eugene Rosamond, Memphis, Tenn, Peter Bassoe, Chicago, Charles Ogilvy, New York, E D Ebright, Coney Island, N Y, and Samuel W Boorstein, New York.

Dr Russell A Hibbs, New York, read a paper on "The Treatment of Spinal Deformities Caused by Infantile Paralysis" Discussed by Drs Emil S Geist, Minneapolis, Fred J Fassett, Seattle, John Ridlon, Chicago, Horace R Allen, Indianapolis, Albert H Freiberg, Cincinnati, E D Ebright, Coney Island, N Y, James W Sever, Boston, Walter Truslow, Brooklyn, and Russell A Hibbs, New York.

Dr Michael Hoke, Atlanta, Ga, read a paper on 'The Correction of Skeletal Defects of the Lower Extremities Resulting from Poliomyelitis," with lantern demonstration and moving pictures Discussed by Drs Charles LeRoy Lowman Los Angeles, J D Griffith Kansas City, Mo, Walter Truslow, Brooklyn Russell A Hibbs, New York and Michael Hoke, Atlanta, Ga

With the consent of the section, the chairman appointed Dr Charlton Wallace New York to act as vice chairman in the place of Dr Robert B Osgood who was absent in Europe, and Drs Charlton Wallace and Charles G Stern Cleveland, in the places on the Executive Committee made vacant by the absence of Drs Nathaniel Allison St Louis, and Leonard W Ely, San Francisco

Thursday June 7—Morning

Dr Frank E. Peckman Providence, R I, read a paper on The Treatment of Scoliosis' Discussed by Drs Albert H Freiberg Cincinnati, John Ridlon Chicago Royal Whitman New York, E H Arnold New Haven Conn, Virgil P Gibney New York, Frank E Peckham Providence, R I and James W Sever, Boston

Robert Jones of England was nominated for recommendation to be elected Honorary Member of the American Medical Association

Dr Royal Whitman New York read a paper on Operative Orthopedics" Discussed by Drs Samuel Kleinberg New York, Edwin W Ryerson Chicago, Melvin S Henderson Rochester Minn Henry Keller New York, Royal Whitman, New York and Albert H Freiberg Cincinnati

Drs Robert B Osgood and Edward C Bull Boston, presented a paper on The Operative Treatment of Tuberculosis of the Knee Joint in Adults" Discussed by Drs M S Henderson Rochester Minn, John Ridlon Chicago, Mark H Rogers Boston, James A O'Reilly St Louis Henry Keller New York, Arthur Steindler Iowa City Iowa, E H Arnold New Haven, F J Gaenslen Milwaukee Wis Edwin W Ryerson Chicago, John Ridlon Chicago, John Dunlop Washington and Edward C Bull Boston.

Thursday June 7—Afternoon

The following officers were elected chairman Dr Albert H Freiberg Cincinnati vice chairman Dr Fred J Fassett Seattle secretary Dr Henry B Thomas Chicago, delegate, Dr John Ridlon Chicago alternate Dr J D Griffith, Kansas City Mo

Report of the Tuberculosis Committee was called for In the absence of the chairman, Dr Leonard W Ely San Francisco one of the members of the committee Dr James A O'Reilly St Louis made a motion that the committee be abolished The motion was seconded and carried

Dr Russell A Hibbs New York in the absence of the chairman of the Preparedness Committee Dr Joel E Goldthwait, Boston read the report of the committee together with an attached list of equipment On motion, duly seconded the report was accepted as read

A motion was made that the same committee already appointed from the American Orthopedic Association be made also a committee of the Section on Orthopedic Surgery of the American Medical Association for the purpose of taking up with the government and its various officials the details of orthopedic preparedness Of this committee Dr Joel E Goldthwait Boston was chairman The motion was seconded and carried (Not transmitted to the House of Delegates)

Dr R O Meisenbach Buffalo offered the following resolution

> Whereas The Canadian government has experienced considerable difficulty in regard to the feet of its soldiers
>
> *Resolved* That it is the sense of the Section on Orthopedic Surgery of the American Medical Association that the attention of the proper authorities should be called to the fact and the possibility of avoiding this difficulty by appointing an orthopedic surgeon on the exemption boards that are now being formed

This resolution was adopted (Not transmitted to the House of Delegates)

Dr Henry Ling Taylor New York made a motion that the attention of the Preparedness Committee be called to the fact that the soldiers particularly in training camps, do not have long enough hours of sleep, in consideration of the strenuous work that they are called on to perform The motion was seconded and carried (Not transmitted to the House of Delegates)

Drs William Sharpe and Benjamin P Farrell, New York presented a paper entitled 'A Further Report of the First Sixty Five Cases of Cranial Decompression for Selected Cases of Spastic Paralysis Due to Hemorrhage' Discussed by Drs Fred J Fassett Seattle and William Sharpe, New York

Dr James W Sever Boston read a paper on The Results of the Treatment of Obstetric Paralysis Discussed by Drs John Dunlop Washington, A S Taylor New York, J A Nutter Montreal John J Nutt, New York and James W Sever, Boston

Dr Walter M Brickner New York read a paper on "Pain in the Arm Subdeltoid (Subacromial) Bursitis," illustrated by slides and moving pictures Discussed by Drs Eli Moschcowitz New York (lantern slides) Arthur H Bogart Brooklyn Fred J Fassett Seattle James A O'Reilly St Louis Milton G Wasch Brooklyn H O Wolff, New York John Dunlop Washington D C and Walter M Brickner New York

Dr Frederick J Gaenslen Milwaukee Wis read a paper on Simplified Technic of Laminectomy Discussed by Dr Edwin W Ryerson Chicago

Drs Henry Ling Taylor and George Barrie New York presented a paper on Juxta-Articular Bone Lesions of the Hip - Discussed by Drs L D Oppenheimer, New York, Henry Ling Taylor New York and George Barrie, New York

Friday June 8—Morning

A joint meeting was held with the Section on Nervous and Mental Diseases and the Section on Diseases of Children

The meeting was called to order at 9 10 by Dr Bernard Sachs chairman of the Section on Nervous and Mental Diseases

Dr T C McCleave Oakland Calif, made a motion that the secretary of his section be requested to inform the secretary of the American Medical Association that it was the wish of the sections that hereafter no important action affecting the sections be taken by the Association without first sending notice to the sections that such action was contemplated The motion was seconded and carried

The following papers were read as a symposium on "Infantile Paralysis

Dr George Draper New York 'Early Diagnosis and Specific Treatment of Poliomyelitis'

Dr Charles Herrman, New York "Contagiousness of Acute Poliomyelitis

Dr Haven Emerson of the Department of Health of New York City was then asked to speak about the epidemic of the disease there last summer, after which the following papers of the symposium were read

Dr Frederick Tilney New York "Recent Additions to Our Knowledge of Poliomyelitis'

Dr LaSalle Archambault Albany N Y "The Hematogenous Invasion of the Cerebrospinal Axis in Poliomyelitis

Dr Henry L K Shaw Albany N Y 'Results of the Present Epidemic of Infantile Paralysis

Dr Robert W Lovett Boston Treatment of Infantile Paralysis with Especial Reference to a Study of the New York State Cases'

These papers were discussed by Drs Herman Schwartz New York Reginald H Sayre New York, Horace Greeley Brooklyn William C Hager Brooklyn, Henry Keller, New York Alexander Spingarn Brooklyn, George Draper, New York, Charles Herrman, New York, and LaSalle Archambault Albany

After the adjournment of the joint meeting, the Section on Diseases of Children remained

Dr T C McCleave, Oakland Calif, made a motion that a vote of thanks be given by the Section on Diseases of Children to Drs Charles G Kerley, New York, A. Jacobi New York and H M McClanahan Omaha. The motion was seconded, and was carried unanimously

Marriages

HAROLD HOUSTON JONES, M D, Winfield, Kan, to Miss Madeline Tinry of Kansas City, Mo, at St Joseph, Mo, May 19

BUFORD MOURSE COLBY, M D, St Joseph, Mo, to Miss Alice Malony of Kansas City, Mo, at St Joseph, May 19

DANIEL CLARK WHARTON SMITH, II, M D, Baltimore, to Miss Edwina Caven Hensel of Haverford, Pa, June 2

ANDREW JACKSON WARREN, M D, to Miss Margaret Lyle Spurgeon, both of Hillsboro, N C, June 12

FRANK E. HURRLE, M D, Little Rock Ark, to Miss Mary V Walker of Pine Bluff, Ark, April 17

JOSEPH EARLE MOORE, M D, to Miss Grace Douglas Barclay, both of Baltimore, May 24

HERMAN LAURENCE DOWD, M D, to Miss Alice Richard, both of New York, May 24

FRED W BUCKLEY, M D, to Miss Louise Sabin, both of Beatrice, Neb, May 23

Deaths

Thomas Palmer Satterwhite, M D, Louisville, Ky, University of Louisville, 1857, aged 82, formerly a Fellow of the American Medical Association and fourth vice president in 1895-1896, one of the most widely known practitioners of Kentucky, from 1863 to 1869 demonstrator of anatomy in his alma mater, for many years surgeon to Sts Mary and Elizabeth and the City hospitals, Louisville, for twelve years president of the board of commissioners of the Kentucky Central State Hospital, Lakeland, surgeon for the Big Four Southern, and Chesapeake and Ohio systems, once president of the Association of Surgeons of the Southern Railway, physician and surgeon for the Louisville School of Reform for many years, the first to inaugurate a free dispensary in Louisville, died at his home, June 3, from cerebral hemorrhage

Julius O Schlotterbeck, Ann Arbor, Mich, University of Michigan, Ph C, 1888, B S, 1891, University of Bern, Ph D, 1896, Professor of Pharmacognosy, University of Michigan School of Pharmacy and Dean of the School, formerly a member of the Council on Pharmacy and Chemistry of the American Medical Association (1905-8), a member of many scientific societies, and the author of many papers on plant chemistry and related subjects, died at Ann Arbor, Mich, May 31, after a long illness from liver disease

Luther Anson Todd, M D, St Joseph, Mo, College of Physicians and Surgeons in the city of New York, 1900, aged 42, a Fellow of the American Medical Association, professor of anatomy in the Ensworth-Central Medical College, St Joseph, chief surgeon to the St. Joseph and Grand Island Railroad and to the St Joseph Street Railway Co, formerly president of the board of health of St Joseph, died in an interurban car near Camden Point, Mo, May 22, from cerebral hemorrhage

Harry Mayham Keator, M D, Roxbury, N Y, College of Physicians and Surgeons in the City of New York, 1902, aged 43, a Fellow of the American Medical Association and a member of the New York Academy of Medicine, clinical assistant at the Presbyterian Hospital and Vanderbilt Clinic, New York, and demonstrator of physiology in his alma mater, who has been ill with tuberculosis, is reported to have committed suicide, at the home of his sister, in Oneonta, N Y

William Charles Walser, M D, Livingston, Staten Island N Y, College of Physicians and Surgeons in the City of New York, 1873, aged 66, a member of the Medical Society of the State of New York, for many years chief surgeon to the S R. Smith Infirmary, now the Staten Island Hospital, and consultant to the Nursery and Child's Hospital, Fort Richmond, once president of the Staten Island Medical Society, died at his home, May 21

Henry Pinckney Frost, M D, Boston, University of Maryland, Baltimore, 1889, aged 48, a Fellow of the American Medical Association, and a member of the American Neurological Association and American Medico-Psychological Association, superintendent of the Boston State Hospital Mattavan, formerly assistant superintendent at the Willard and Buffalo (N Y) state hospitals, died in the Boston State Hospital, May 23, from pneumonia

Foster Thayer, M D, Riverhead, N Y, Bellevue Hospital Medical School, 1866, aged 74, acting assistant surgeon, U S Navy, during the Civil War, assistant surgeon in the army of the Argentine Republic in 1867 and 1868, medical director of the Mutual Benefit Association of Suffolk County, for nearly half a century a practitioner of Riverhead, died at his home, May 18

David Arthur Jay, M D, Lemars, Iowa, College of Physicians and Surgeons, Keokuk, 1890, aged 48, formerly a Fellow of the American Medical Association, for sixteen years president of the Eldon Big Four Fair Association, a member of the Association of Military Surgeons of the United States, died at the family home, near Agency, Iowa, May 12

Edmund Janes Palmer, M D, New York, College of Physicians and Surgeons in the City of New York, 1881, aged 60, a Fellow of the American Medical Association, and a member of the New York Society for Medical Jurisprudence, for thirty years chief physician to St Luke's Home, New York, died at his home, May 28

Isaac Winter Heysinger, M D, Philadelphia, Jefferson Medical College, 1867, aged 75, a veteran of the Civil War, a member of the commission which supervised the construction of the Rittersville, Pa, State Hospital, well known as a writer artist, linguist, and musician, died at his home, May 18, from heart disease

Emanuel Hochheimer, M D, New York, New York University, New York, aged 62, a Fellow of the American Medical Association, visiting physician to the Montefiore Home and Yonkers Home for the Aged and Infirm, physician to the New York City Asylum for the Insane, died at his home, May 29

Simon John Tunstall, M D, Brighouse Station, near Vancouver, B C, McGill University, Montreal, 1875, aged 64, once president of the Canadian Medical Association, and one of the founders of the Vancouver Medical Association, died at his home, March 15, from hemorrhage of the stomach.

Junius D Young, M D, Stockton, Calif, University of California, San Francisco, 1881, aged 59, a member of the Medical Society of the State of California, chief of the medical staff of the Stockton State Hospital for the Insane for more than thirty years, died at his home, May 23

David Geiger Garland, M D, Carney's Point, N J, University of Louisville, Ky, 1913, aged 27, formerly of Huntington, W Va, but for the last fifteen months assistant chief surgeon for E I du Pont de Nemours & Co, died at White Haven, Pa, May 13, from tuberculosis

Everal Caleb Haviland, M D, Keene, N H, Albany, N Y, Medical College, 1904, aged 39, a Fellow of the American Medical Association, for six years assistant physician to the Brattleboro, Vt Retreat, and for two years city physician of Keene, died at his home, May 27

Thomas J Kane, M D, Paterson, N J, Long Island College Hospital, Brooklyn, 1872, aged 71, a member of the Medical Society of New Jersey, died in St Joseph's Hospital Paterson, May 26, three days after an operation for the relief of intestinal disease

Cornelius O'Connor, M D, Kansas City, Mo, Kentucky School of Medicine, Louisville, 1885, aged 64, a Fellow of the American Medical Association, for many years a member of the staff of St Joseph Hospital, Kansas City, died in that institution, May 31

Robert Home, Jr, M D, Toronto, Ont, University of Toronto, Ont, 1913, aged 26, captain, Royal Army Medical Corps who went to Europe with the first Canadian expeditionary force, in August, 1914, is reported to have been killed in battle

James Roy Freeland, M D, Pittsburgh, University of Pennsylvania Philadelphia, 1904, aged 33, a Fellow of the American Medical Association, and a specialist in obstetrics and gynecology, died at his home in East End, Pittsburgh, May 28

William James Squire, M D, Buffalo, University of Buffalo, N Y, 1893, aged 57, died at his home, April 28

Frank Holland, M D, Atlanta, Ga, Atlanta Medical College, 1879, aged 61, died at his home, May 7

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

SOME MISBRANDED "COUGH REMEDIES"*

Barker's Remedy for Catarrh, Coughs, Colds and Rheumatism.—Henry W Barker who traded as the H W Barker Medical Co., Sparta, Wis, manufactured H W Barker's Remedy for Catarrh, Coughs Colds and Rheumatism" This nostrum was sold under claims that would lead the public to believe that it was effective as a remedy for, and for the prevention of, 'catarrh" *la grippe*, hay fever, croup, whooping cough, tonsillitis and all catarrhal affections of the throat lungs stomach and mucous membrane and that it would also prevent consumption and diseases of the lungs The federal chemists reported that the product was essentially sugar and water with a small amount of cubebs potassium iodid and creosote having a wintergreen flavor and being colored pink. The claims made for this mixture were declared to be false and fraudulent and applied recklessly and wantonly Barker entered a plea of *nolo contendere* and was fined $100—[*Notice of Judgment No 4401*]

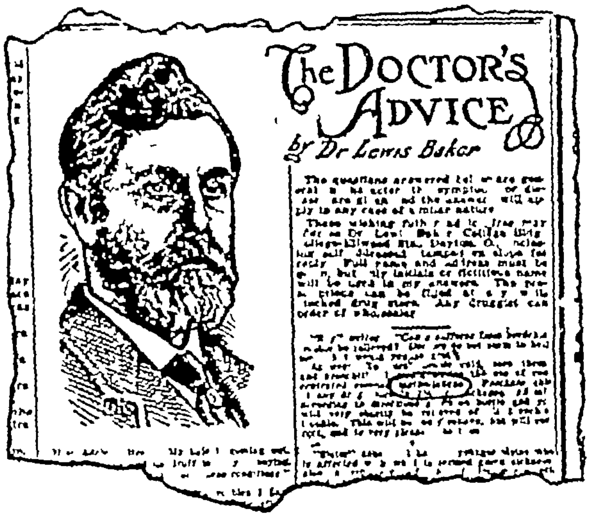
Mathieu's Cough Syrup—Charles Favreau and Frank Colletter trading as Favreau & Collette Marlboro Mass, sold Mathieu's Cough Syrup" which has formerly been called Syrup of Tar and Cod-Liver Oil" The stuff admittedly contained 5¼ per cent. of alcohol and 2½ minims of chloroform to the fluid ounce The label declared that the product contained the active principles of tar and cod liver oil" The federal chemists reported that very little if any, tar was present and cod-liver oil was absent There was a minute quantity of creosote and some menthol in the stuff Of the 53 77 per cent. solids present, more than 50 per cent was sugar It was sold under the claim that it was an effective remedy for scarlet fever, croup and diphtheria and a cure for croup These claims were declared to be false and fraudulent and made knowingly, recklessly and wantonly Collette entered a plea of *nolo contendere* and was fined $25 The case against Favreau was *nolle prossed*—[*Notice of Judgment No 4405*]

Forrest's Juniper Tar—This preparation was made and sold by the J Harrison Whitehurst Co ('J H Whitehurst, M D Pharm. D) which was a trade name under which Anna Lavinia Whitehurst did business in Baltimore The preparation admittedly contained 22 per cent alcohol and the government chemists found over 55 per cent of petroleum and oil of tar The product was declared misbranded because it was claimed to be a safe, reliable and speedy remedy for all kinds of throat and lung diseases for arresting and curing catarrh, influenza and consumption in its early stages as well as whooping cough, inflammatory rheumatism and piles It was also claimed to be a cure for consumption and obstinate coughs These claims were characterized by government officials as false and fraudulent and applied knowingly recklessly and wantonly Anna Lavinia Whitehurst entered a plea of *nolo contendere* and was fined $15—[*Notice of Judgment No 4417*]

Terraline—The Hillside Chemical Co of Newburgh, N Y, was charged with misbranding under the Food and Drugs Act for shipping in interstate commerce quantities of Terraline Plain and 'Terraline with Heroin' "Terraline Plain' was found to be simply liquid petrolatum while Terraline with Heroin" was a similar drug carrying heroin in solution "Terraline Plain" was declared misbranded because of the claims that it was easily digested and of value as nutriment and, indeed, was preferable to cod liver oil when, in fact, it was not digestible was not preferable to cod liver oil and contained no nutritive value whatever Furthermore, the claims made for Terraline Plain' and Terraline with Heroin" that they were effective remedies for consumption asthma la grippe, croup and all diseases of the throat and lungs were declared wantonly false and fraudulent The Hillside Chemical Company pleaded guilty and was fined $25—[*Notice of Judgment No 4505*]

Classe's Cough Syrup—This preparation was sold by William P Diggs of St Louis who did business under the trade name W P Diggs & Co The stuff, which had an odor of tar, contained about 60 per cent of sugar 7 per cent alcohol, 3 per cent glycerin with tolu and wild cherry present The claims that it was an effective and beneficial remedy in consumption asthma whooping cough, croup and all inflammation of the lungs were declared wantonly and recklessly false and fraudulent Diggs pleaded guilty and was fined $10 and costs—[*Notice of Judgment No 4489*]

Essence Mentho-Laxene—This is one of the numerous nostrums put out by the Blackburn Products Co Dayton, Ohio which advertises by means of the fake prescription' method *The Doctor's Advice* by Dr Lewis Baker,' a scheme for advertising which gives the impression that the advertisement is really a newspaper health department" is one of the means by which Mentho Laxene has been exploited The preparation which according to the federal chemists contained 34 per cent alcohol together with menthol amonium salt, chlorid sugar, drug extract and an unidentified alkaloid, was sold under the claim that it would prevent consumption and *la grippe* and was an effective remedy for croup and asthma These claims were declared false and fraudulent and applied knowingly and in reckless and wanton disregard of their truth or falsity The company pleaded guilty and was fined $50 and costs.—[*Notice of Judgment No 4437*]


The Doctor's Advice
by Dr Lewis Baker

Brown's Acacian Balsam.—The Kells Co, Newburgh, N Y, sold a preparation called 'Dr O Phelps Brown's Acacian Balsam" Government chemists reported that this product contained 11 per cent of alcohol and over 16 grams of acacia to each 100 c c In addition, nitrate, licorice, meconic acid, tartrates, reducing sugar and sodium and potassium compounds were found present It was sold under the claim that it was a remedy for consumption asthma, all diseases of the lungs, diphtheria and heart complaints These claims were declared recklessly and wantonly false and fraudulent The company pleaded guilty and was fined $50—[*Notice of Judgment No 4444*]

Sykes' Sure Cure for Catarrh—Dr Sykes' Sure Cure Co, Chicago Ill, sold the Dr Sykes Sure Cure for Catarrh" According to the label, the stuff was originated by Dr C R Sykes, who "took a course of medical studies and graduated as an M D in Bennett Medical College, Chicago and the rest of his life was spent in successfully treating catarrh" The government chemists reported the results of analyses of two samples, one shipped from Illinois to California and the other from Illinois to New York. The samples varied but contained essentially about 2 per cent alcohol with potassium chlorate, ammonium chlorid, and small amounts of hydrastin and methyl salicylate The claim that the stuff was a cure for consumption, catarrh and diabetes mellitus was declared false and fraudulent. The company pleaded guilty and was fined $100 and costs —[*Notice of Judgment No 4459*]

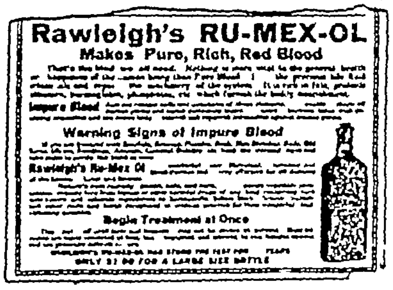
---

* This material with much additional appears in the new edition of the pamphlet Convictions price fifteen cents.

Warner's White Wine of Tar Syrup—The C D Warner Co of Coldwater, Mich, manufactured and sold "Dr Warner's White Wine of Tar Syrup," which contained opium and alcohol The government officials declared that the preparation was misbranded, first, because the name was false and misleading in that it indicated that the stuff contained tar and a substantial amount of wine when, as a matter of fact, it contained no tar whatever and but an insignificant amount of wine The government further declared that the claims that the preparation was an effective remedy for consumption and all diseases and affections of the throat and lungs were false and fraudulent and made knowingly, recklessly and wantonly The company pleaded guilty and was fined $50 —[*Notice of Judgment No 4422*]

Rawleigh's Golden Cough Syrup and Rawleigh's Ru-Mex-Ol—A Freeport, Ill, corporation, the W T Rawleigh Medical Co, manufactured both these products The "Golden Cough Syrup" admittedly contained alcohol and chloroform The government chemists reported that in addition to these substances there was menthol and guaiacol in small amounts and indications of horehound It was sold under the claim that it would cure whooping cough and asthma, claims which the authorities declared were recklessly and wantonly false and fraudulent The other product "Ru-Mex-Ol" admittedly contained 26½ per cent alcohol, in other words, it was just one-half the strength of raw whiskey The federal chemists found, in addition to the alcohol, some vegetable matter in which rhubarb was indicated The preparation was sold as a "valuable remedy" for "scrofula" and "eczema" for always keeping the blood pure, for fortifying the system by purifying the blood and thus preventing tuberculosis The government maintained that these claims were recklessly and wantonly false and fraudulent The company pleaded guilty and was fined $100 and costs —[*Notice of Judgment No 4419*]

Never Let a Cough "Hang on"
Golden Cough Syrup
A SAFE RELIABLE REMEDY FOR ALL COUGHS AND COLDS
Contains No Dangerous Drugs.
Rawleigh's Cough Medicines Are Safe Sure and Reliable.
TRY IT ON


Rawleigh's RU-MEX-OL
Makes Pure, Rich, Red Blood
Impure Blood
Warning Signs of Impure Blood
Rawleigh's Ru-Mex Ol
Begin Treatment at Once
ONLY $1 00 FOR A LARGE SIZE BOTTLE

Gooch's Mexican Syrup of Wild Cherry, Tar, Etc—This preparation, which contained morphin and alcohol, was manufactured by the Cincinnati Drug and Chemical Company, Cincinnati, Ohio The government chemists reported that, in addition to the morphin and alcohol, there were 61 1 per cent solids, of which more than 58 per cent was sugar Glycerin also was found as well as methyl salicylate and benzaldehyd used as flavoring Tar and cherry extract were reported to be present in very small amounts This mixture was sold as a "cure" for consumption and a remedy for croup, whooping cough and spitting of blood The claims were declared false and fraudulent and applied knowingly, recklessly and wantonly The company pleaded guilty and was fined $25 and costs —[*Notice of Judgment No 4425*]

Correspondence

JUSTICE TO THE PHARMACIST

To the Editor —The one outstanding feature of the present world-wide war, which differentiates it from all previous wars, is the recognition of the importance of the industrial resources of nations Not only is the war of today a contest between military forces, but it is a contest between industrial forces Every nation involved is mobilizing its industries—using the term in its broadest sense—and stimulating their growth and development to the highest plane of efficiency, realizing that, in the final analysis, victory will go to that nation or those nations which will hold out the longest—industrially, financially and militarily It is a war of attrition Such being the case, it is vital that the United States, having entered into the war, should mobilize its industries—which it is doing with the aid of the Council of National Defense—and do everything possible to strengthen the weak links of its industrial chain

One of the most important industries of the war is the relief of human suffering and the saving of human life, and this is the special province of the medical profession, which has never failed to discharge its duty in the past and will not fail now No one can question the loyalty of the American medical profession to the highest ideals of professional conduct or its patriotism

The weakest link of the army is its system of pharmaceutic service This is exceedingly unsatisfactory, because it is hopelessly antiquated We have no pharmaceutic corps, pharmacists being compelled to enlist as privates without any provision for commissioned rank, as in the dental and veterinary corps France, Germany, Japan and other nations have such corps, in charge of a pharmaceutic expert of high military standing The head of the Pharmaceutic Corps in Germany is of the rank of colonel, in Japan of the rank of lieutenant-colonel, and in Italy and France of the rank of major-general

The present system is detrimental to the efficiency of the army because it fails to recognize the importance of proper and sufficient pharmaceutic service and denies to the sick and wounded the best pharmaceutic service the nation can give The present system is unfair to pharmacy and pharmacists Pharmacy is a profession and the graduated pharmacists of today have had years of collegiate training and practical experience To enlist professional men as privates is not only unjust to the men, but it is also unjust to the army, because it denies to the army the possibilities of service which such men could render We hear a great deal these days about commercialism in modern pharmacy, but there has never been a time when American pharmacists, as a class, were being better trained for professional work than today There are upwards of 100 colleges of pharmacy in the country and these are growing less in number—and stronger The entrance requirements are being raised, the curriculums extended and everything possible is being done to uplift American pharmacy, professionally One thousand five hundred pharmacists graduate this year and they are loyal to high professional ideals

The present system is unfair to the medical corps because it denies to that body the assistance and support that a properly trained pharmaceutic corps could give. Pharmacists have been trained not only in pharmacy, but they have also had elementary training in some of the medical sciences, and could be made most useful "medical assistants" in the field while in the hospitals they could be made purveyors and given charge of the medical supplies, as well as render pharmaceutical and chemical service in the dispensing of drugs and in the chemical and bacteriologic examination of food water, milk excrements, etc In addition they could be developed into useful workers in Roentgen ray, anesthesia bandaging and sanitation The present war is more destructive in injuries and fatalities, both to privates and to physicians, than ever before Before the war, our army required seven medical officers for each thousand combatants Today our army is requiring ten medical men for each thousand while the British forces have increased their number to nineteen and it is more than probable that when we get into action we shall have to adopt the British ratio This means 19 000 physicians for each million of troops or 38 000 for 2 millions Today there are probably less than 5 000 medical men in commission or in the reserve corps Hence it is exceedingly important that the medical forces of the country be mobilized and a properly trained pharmaceutic corps could be made of great usefulness to the medical corps as assistants ' both in the field and in hospitals

Approximately there are 120 000 pharmacists in the United States from which an ample supply of skilled pharmacists could be drawn but the conditions of pharmaceutic service in the army will have to be radically changed before they can do their best work American pharmacy is a profession, no matter how much it may be tinctured in some directions with commercialism and American pharmacists in general and the American Pharmaceutical Association in particular have been making serious and earnest endeavors to improve existing conditions

Like the cry of Macedonia we ask the great American medical profession to come over and help us' in the upbuilding of American pharmacy so that both the profession of medicine and the profession of pharmacy may be bettered We ask also that the medical profession put its seal of approval on the movement to establish a pharmaceutic corps in the army and urge the War Department and the Congress to establish such a corps with proper military standing and responsibilities American pharmacy is not seeking any special privilege but it is asking for proper professional recognition in the army service to the end that it may have the opportunity to do its fullest and best work for the sick and the wounded

Joseph W England Philadelphia

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed Every letter must contain the writer's name and addre but these will be omitted on request

PRESERVATION OF EGGS IN WATER GLASS

To the Editor—Kindly help me in finding directions for preserving eggs which appeared in The Journal about two months back. It consisted in putting them in a solution of water glass but I have forgotten the strength given. If you can refer me to the number in which it appeared I shall be very much indebted

F E. Brown M D Baltimore,.

Answer.—The following articles on this subject have appeared in The Journal

Water Glass Queries and Minor Notes Aug 29 1914 p 796.

Water Class in the Preservation of Eggs Queries and Minor Notes Sept. 5 1914 p 883

Blunt K, and Wang C C Chinese Preserved Eggs—Pidan *Jour Biol Chem* 1916 **28** 125 abst The Journal Jan 6 1917 p 66

Pidan—An Oriental Food editorial Feb 10 1917 p 468

The following is an abstract of a method recently published by the New York State College of Agriculture at Cornell University

> Eggs should be preserved during March April May and June when the production is greatest and the price is lowest. The commercial water glass solution may be obtained from any drug store or the powder can be dissolved in a definite quantity of water as stated in the directions on the package
>
> If the commercial water glass solution is used mix 1½ quarts with 18 quarts of pure water water that has been boiled is preferable Stir the mixture until the ingredients are thoroughly mixed A stone jar is the most suitable vessel for the mixture Two 8-gallon jars are sufficient for 30 dozen eggs with the amount of solution just prescribed After the water glass is thoroughly mixed pour it into the vessels to be used being sure that the vessels are absolutely clean Place the eggs in the water glass see that those at the top are submerged under at least 2 inches of the liquid and cover the jars in order to prevent evaporation Put the jars in a cool place where they will be undisturbed during the year
>
> If there is any doubt as to the freshness of the eggs candle them or see whether they sink when placed in a dish of fresh water If an egg sinks it is reasonably fresh
>
> Do not preserve dirty eggs or eggs that have been washed Washed eggs will not keep because the protective gelatinous coating has been removed by the washing and dirty eggs will become tainted in flavor If it is desired to boil eggs preserved in water glass prick a small hole through the large end of the shell before placing them in the water The pores of shell have been sealed by the water glass solution and without the pinhole the expanding air within the shell would burst it

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery July 9 Chairman, Dr S W Welch Montgomery

Alaska Juneau July 3 Sec Dr H C DeVighne Juneau

Arizona Phoenix July 2-3 Sec Dr John W Thomas 306 Goodrich Bldg Phoenix

California San Francisco July 10 Sec Dr Charles B Pinkham 523 Forum Bldg Sacramento

Colorado Denver July 3 Sec Dr David A Strickler 612 Empire Bldg Denver

Connecticut Regular New Haven July 10 11 Sec Dr Charles A Tuttle 196 York St New Haven

Connecticut Eclectic New Haven July 10 Chairman Dr John W Fyfe Saugatuck

Connecticut Homeopathic New Haven July 10 Sec Dr Edwin C M Hall 82 Grand Ave New Haven

Delaware Dover and Wilmington June 19 21 Sec Dr H W Briggs 1026 Jackson St Wilmington

District of Columbia Washington July 10 Sec Dr Edgar P Copeland The Rockingham Washington

Florida Regular Palatka, June 19 20 Sec Dr E W Warren Palatka

Indiana Indianapolis July 10-12 Sec Dr W T Gott 84 State House Indianapolis

Kansas Topeka June 19 21 Sec Dr H A Dykes Lebanon

Kentucky Louisville June 19 21 Sec Dr A T McCormack Bowling Green

Maine Augusta July 5 6 Sec. Dr Frank W Searle 776 Congress St Portland

Maryland Baltimore June 19 Sec Dr J McP Scott 137 W Washington St Hagerstown

Massachusetts Boston July 10-12 Sec. Dr Walter P Bowers Room 501 No 1 Beacon St Boston

Mississippi Jackson June 19 20 Sec Dr W S Leathers Oxford

Missouri St Louis June 18 Sec Dr George M Jones 206 Washington St. Jefferson City

New Hampshire Concord June 25 26 Sec, Dr W T Crosby Beacon Bldg Manchester

New Jersey Trenton June 19 20 Sec Dr Alexander MacAlister 438 East State St Trenton

New Mexico Santa Fe July 9 Sec Dr R K McClanahan U S Naval Hospital Las Animas Colorado

New York Albany, Buffalo New York and Syracuse June 26-29 Sec Dr Willard J Denno Education Bldg Albany

North Carolina Raleigh June 19 Sec. Dr H A Royster 423 Fayetteville St Raleigh

North Dakota Grand Forks July 3 Sec Dr George M Williamson Grand Forks

Oklahoma Oklahoma City July 10-11 Sec, Dr R V Smith Tulsa

Pennsylvania Philadelphia and Pittsburgh July 10-12 Sec. Mr Nathan C Schaeffer State Capitol Harrisburg

Rhode Island Providence July 5 Sec., Dr Gardner T Swarts 315 State House Providence

South Dakota Deadwood July 10 Sec Dr Park B Jenkins Waubay

Texas Austin June 19 21 Sec. Dr M F Bettencourt Mart

Vermont Burlington July 10 12 Sec Dr W Scott Nay Underhill

Virginia Richmond June 19 22 Sec Dr J W Preston 215 S Jefferson St Roanoke

Washington Seattle July 3 5 Sec Dr C N Suttner, Walla Walla

West Virginia Charleston July 10 Sec. Dr S L Jepson Capitol Bldg Charleston

Wisconsin Milwaukee June 26 Sec Dr J M Dodd 220 E 2nd St Ashland

Wyoming Laramie, June 27 29 Sec Dr H E McCollum Laramie

PREPARATION OF MEDICAL MISSIONARIES *

At a conference held under the auspices of the Board of Missionary Preparation in New York some time ago on 'The Preparation of Medical Missionaries for Service' the following was adopted

MEDICAL PREPARATION

The following outline of the professional training of a medical missionary takes for granted a four-year course in a Class A medical school (American Medical Association classification) It demands seven years of training after graduation from the high school and points out the advantages of three years more

---

* Fifth Annual Report of the Board of Missionary Preparation p 339

1 PREMEDICAL EDUCATION (*a*) A four-year high school course of at least fourteen units, including seven units of required work as follows

English, two units
Latin, Greek or a modern foreign language, two units
American history and civil government, one unit.
Algebra to quadratics one unit.
Plane geometry, one unit

The other seven units may be made up from any other secondary school subjects A unit of manual training or of domestic science may be advisable

(*b*) In addition to the high school course, a college course of at least two years, or its full equivalent, which shall include as a minimum courses of eight semester hours each in chemistry, physics, biology and French or German The science courses should include laboratory work In a two-year college course the time not occupied by the foregoing subjects should be spent on a selection from the following

English language and literature
Mathematics
History
Biblical history and literature

(*c*) A third year in college is strongly recommended, based largely on the foregoing list As optional subjects for the third year the following are suggested

Sociology
Psychology
History and methods of education

(*d*) If the age of the candidate does not prevent, the advantage of the full course of four years in college is distinctly recognized because of the larger opportunity offered for general culture and for religious training Some of the subjects for which this additional year would afford an opportunity are

Economics
History of religion
Social and religious survey of the world
Comparative religion
Essentials of Christianity

2 MEDICAL EDUCATION A course of four years in a medical school of Class A The regular curriculum should be followed, and no attempt made to specialize except through optional or elective courses Whatever spare time or energy the student may have can be given to the inspection of thoroughly organized, finely equipped and well managed hospitals to gain ideals of efficiency, and to the study of health service organizations and of various forms of organized philanthropic service to become acquainted with standardized methods of sanitation and relief

3 GRADUATE MEDICAL TRAINING *Required*—At least one year as intern in a good hospital

Strongly Recommended—(*a*) One year of postgraduate study in subjects which are important for medical missionary work The more important subjects are

Surgery
Obstetrics
Diseases of women and children
Diseases of the eye, ear, nose and throat.
Tropical diseases
Preventive medicine, hygiene, and sanitation

(*b*) Keeping, as far as possible, in touch with hospital work, while learning the language, during the first year or so on the missionary field Professional eagerness, however, should be strictly subordinated to language mastery, unless the doctor is to be related to an institution in which the study is wholly in English The preliminary courses in phonetics and language acquisition, mentioned below, will tend to greatly reduce the time needed for such mastery

4 SPECIAL PREPARATION FOR WOMEN MEDICAL MISSIONARIES In view of the scope of the medical work of a large proportion of women physicians in the Orient, women medical missionaries should be especially trained in obstetrics and the diseases of women and children Such training may be secured in some instances during the regular medical course, and in others by supplementary study and hospital experience

5 LICENSE TO PRACTICE MEDICINE Every appointment to medical missionary service should be conditioned on the passing of an examination by an examining board of some state or other authority This is important both in the interests of the missionary's standing and as a protection to him in case he should be compelled to relinquish his work abroad and take up permanent practice in the home land

6 LANGUAGE ACQUISITION Since by the last year of training the medical missionary candidate is almost sure to know his destination, it will be worth while to attend if possible, during the year, a course of lectures on the science of language acquisition and on fundamental phonetics, each with relation to the language to be used in the field

7 FURLOUGH STUDY The medical missionary should plan to take postgraduate instruction in his specialty or in general medicine during his furlough periods, even though he has been given some opportunity for medical study and research while on the field It is to be hoped that every board will realize the importance of this and provide both the opportunity and the necessary funds

---

Book Notices

MEDICAL DISEASES OF THE WAR By Arthur F Hurst, M A, M D, F R C P, Physician and Neurologist to Guy's Hospital Cloth Price $1 75 net Pp 151 New York Longmans Green & Co, 1917

Many books have been written about the surgical aspect of the war, but comparatively little has been published in regard to strictly medical subjects, though all military medical officers appreciate their extreme importance Death and disablement on account of wounds are discounted beforehand, but many a campaign has been lost because of a lack of appreciation of the medical side This book covers the principal diseases encountered, though it appears that almost too much space is taken up with a discussion of nervous disorders This section, however, is extremely interesting, and includes a number of illuminating case reports The author finds that most nervous disorders encountered are functional, and that treatment, in the main, has been successful Hypnotic suggestion seems to have been most efficacious in this type of case In discussing the dysenteries, he devotes space to symptomatology and diagnosis which could have been used to better advantage in giving more details in regard to prophylaxis Excellent chapters on trench fever, paratyphoid fever and gas poisoning should interest our officers, who will shortly see these diseases in their European service The author thoroughly considers epidemic jaundice and beri beri, but it is to be regretted that other camp diseases, such as typhoid fever and diarrhea, are not mentioned As a whole, the book is well written and is most timely Many errors will be avoided by our officers if such a volume is generally studied.

OURSELVES A Personal and Family History Register for Preserving Records of a Private and Personal Nature for One Married Couple and Their Children Also an Appendix Offering Remarks and Hints on the Subject of Development of Children—of Mind, Body, Character and Personality By John Madison Taylor, A.B, M D., Professor of Applied Therapeutics in the Medical Department of Temple University Cloth Price, $5 net Philadelphia F A Davis Company, 1917

The author has arranged in convenient form a series of pages for keeping family records The book includes an index to names, diagrams for listing ancestors, personal histories of health, blanks for baby records, charts for recording weight and height, blanks for clinical laboratory findings, anatomic diagrams, and pages for special happenings, photographs, handwriting, etc The object of the book is to preserve material on heredity and health concerning the individual, the family and the race When the book is completed, it is suggested that it be sent to the Eugenics Record Office, Department of Experimental Evolution, of the Carnegie Institution of Washington, to be there deposited for use in compilation at some future date The ideal which prompted the author of this book seems worth while, and much valuable information will some day be available if a sufficient number of persons cooperate in the work

SANITATION IN WAR. By Major P S Lelean, C B, F R C S, F C S Assistant Professor of Hygiene, Royal Army Medical College With an Introduction by Surgeon General Sir Alfred Keogh, K.C B, M D, F R C P Second Edition Cloth Price, $2 net. Pp 336, with 3 illustrations Philadelphia P Blakiston's Son & Co, 1917

This excellent little manual is by a man who is thoroughly familiar with his subject It is to be regretted that it is in the form of lectures This tends to detract from the value of a book, as the impression is given that the matter has not received careful editing Furthermore, the chapters do not follow in regular sequence For instance, the chapter on the administration of the medical service is sandwiched in between a chapter on insects and one on field conservancy, and in the chapter on medical administration the author takes up such matters as the selection of camp sites and other sanitary details In a chapter on sanitary innovations there is a complete description of those which are most important with working drawings The whole work is eminently practical and though many of the details are different from the methods pursued in our army no one on this side of the water who reads the book can fail to absorb a great deal of information about practical sanitary service

Poetry and the Doctors A Catalogue of Poetical Works Written by Physicians with Biographical Notes and an Essay on the Poetry of Certain Ancient Practitioners of Medicine, Illustrated with Translations from the Latin and by Reproductions of the Title Pages of the Rarer Works By Charles L. Dana A M M D LL.D Cloth Price, $5 Pp 83 with 21 illustrations Woodstock Vermont The Elm Tree Press 1916

In this booklet the author presents a catalogue of poetical works written by physicians short biographical notes of each physician and an essay on the poetry of some ancient medical practitioners The book is artistically prepared and includes numerous reproductions of title pages of many rare books as well as examples of the poetry of Italian German and French physicians The final statement in the essay on early physicians is a note of caution to the physician who feels poetically inclined

> So it is to be hoped that if doctors ever have the divine fire in them they will not prevent its expression always remembering that only the very best poetry is poetry and that mediocrity is more a sin in poetry than in any other art.

As Horace says

> In some professions mediocrity and tolerable endowments may properly be allowed but neither gods nor men give any indulgence to middling poets for poetry designed by nature for improving our minds if it comes short ever so little of the top must sink to the bottom

Text Book of Ophthalmology By Hofrat Ernest Fuchs Professor of Ophthalmology in the University of Vienna. Authorized Translation from the Twelfth German Edition by Alexander Duane M D Surgeon Emeritus, Knapp Memorial Hospital New York. Fifth Edition Cloth Price, $7 Pp 1067 with 462 illustrations. Philadelphia J B Lippincott Company 1917

As the translator who has done his duty well explains the present edition is in several senses a new work. He has made a number of radical alterations in arrangement of the text of the fourth edition which have certainly made the new volume more serviceable as a book of reference In this important sense the present work is the result of the joint labors of both Fuchs and Duane As a reflex of the recent progress of ophthalmology, a number of pages have been added to the chapters on oculomuscular disturbances glaucoma retinal diseases refraction and operations on the eye. Of the many actual additions to our knowledge of opthalmology scattered throughout the book, may be mentioned discussions on ophthalmic therapy by means of tuberculin and other vaccines, the mapping of scotomas and the blind spot squirrel plague and eel s blood conjunctivitis, color testing and the visual field extragenital gonococcus infection, inclusion blennorrhea retinitis stellata, and the etiology of iritis We are sure that this very complete textbook will continue to be favorably received by the profession

Organism and Environment as Illustrated by the Physiology of Breathing By John Scott Haldane M D LL.D F R S Cloth Price $1 25 Pp 138 New Haven Yale University Press 1917

This is a concise and lucid statement of the facts concerned in the regulation of breathing the reaction of the blood and the phenomena of acidosis as now understood Haldane has made important contributions to our knowledge of the regulation of respiration as well as to the special and practical respiratory measures insuring safety under high and low atmospheric pressures He is at the same time a biologic philosopher, and in the last chapter of the book he marshals the physiologic facts of respiration in defense of the so-called vitalistic school, to the tenets of which a number of prominent English scientists appear to subscribe

Medicolegal

Procuring an Unlawful Abortion Involves an Assault

(State v Farnam (Or) 161 Pac R 417)

The Supreme Court of Oregon, in affirming a judgment of conviction of manslaughter, says that procuring an unlawful abortion on any woman always involves an assault in law even when it is done with her consent and connivance because no one can consent to an unlawful act While as between the parties an unlawful act may sometimes be condoned it is not within the power of any person to waive the violation of the law of the country And if procuring an unlawful abortion is an assault the offense comes within those involuntary killings by misdirected violence which constitute manslaughter At common law the producing of an unlawful abortion resulting in the death of the mother was murder by violence The Oregon statute by making the offense manslaughter has not created a new crime but has merely reduced the grade of an old offense by changing the punishment from death to imprisonment in the penitentiary Again the court says that it concludes from certain precedents that at common law the act of producing an abortion was always an assault for the double reason that a woman was not deemed able to assent to an unlawful act against herself, and for the further reason that she was incapable of consenting to the murder of an unborn infant And the court deduces the principle that procuring an unlawful abortion by any means is always in the eye of the law an assault both on the woman operated on and on the unborn child and that the one who in producing such abortion kills the mother stands in no different relation to the law from a person who in an attempt to shoot A, shoots wild and kills B, except so far as the statute has modified the punishment The deceased in this case, a poor, motherless child of 15, was incapable of consenting to an assault on herself or on her unborn child It is sickening to speak of her consenting to the act It was as much a forcible act as though some scoundrel had met her on the road, and knowing her condition had seized her and in the attempt forcibly to bring about a miscarriage had killed her.

Duty and Liability of Carrier of Sick Person—Physician Advising Trip

(C B & Q R R Co vs Schrimpf (U S) 236 Fed R 200)

The United States Circuit Court of Appeals, Eighth Circuit in affirming a judgment in favor of the plaintiff, as administratrix for damages for wrongfully causing the death of her husband, says that on the eleventh day after a physician called and found Mr Schrimpf in bed complaining of a severe cold and congestion of the lungs, he was deemed well enough to take home a distance of about 55 miles by rail It was in March The day was cold, disagreeable, inclement damp and wintry The man had on heavy winter underwear, an ordinary suit of clothes heavy overcoat and a heavy cap He was placed on a cot with a heavy blanket or rug over him and a fur-lined overcoat over that He was then carried across the street about 50 feet to a baggage car of the defendant At one station for fifteen minutes or more he was lying in the front part of the car with his head toward the rear and about one foot in advance of the doorways The doors were both wide open, and a cold and heavy wind was blowing across the car although no reason was shown for having the doors on opposite sides of the car both open During this time he complained of discomfort, of being cold He commenced to show more congestion in the lungs and had more difficulty in breathing On the following morning he displayed symptoms of pneumonia, and he continued to grow worse until he died of lobar pneumonia. While the evidence showed the degree of protection already indicated, it did not show whether the man's face and neck were covered with the blankets or the fur overcoat, and, under the circumstances the court cannot say that a physician's answer (favorable to the plaintiff) to a long hypothetic question was not based on the facts stated in the question or was not consistent with the facts brought out in the plaintiff's case

DISCUSSION

Dr Nellis B Foster, Ann Arbor The conditions which lead to the death of diabetic patients are peculiar Not only are there severe nutritional disturbances which give rise to a peculiar blood picture, but also there are many other conditions which may cause certain organic changes We have made a fundamental mistake in regarding diabetes as one disease There is certainly the greatest possible difference between the clinical pathology and other manifestations Glycosuria in a child does not mean diabetes in the sense in which we understand this term The child will not get the characteristics of this disease unless the diet is bad and the child wasted

Dr D D Van Slyke, New York A question that arises with me is, Is acidosis caused by the acetone bodies, only the retained acid, or is it due also to the acidosis form of excretion? The more acetone bodies in the blood the more severe the acidosis The acid formed in the blood is neutralized by sodium bicarbonate The acid doing the damage is retained, but it could be excreted and take alkali with it This damages the body by causing a double acidosis, the kind that develops the typical diabetic coma These patients die because of the concentration of the acetone bodies in the blood

Dr Frederick Madison Allen, New York Diabetes anatomically is a destruction of the islands of Langerhans It is impossible to think of any diet as being curative of diabetes It is a fact, too, that persons are killed because of the gloomy prognosis given them The treatment is improving, and the time will come when these patients can be saved

Dr E P Joslin, Boston Three per cent of my patients had tuberculosis with their diabetes With regard to the Jewish race in Boston, a paper was published not long ago which covered a period of fifteen years, and this writer found that in proportion to the population there was a remarkable increase of this disease among Jews It is best to keep patients on a low diet, but yet to maintain their weight In my experience in the treatment of children with diabetes, I have never seen a case in which the physician or family gave up treatment in which the child was not in a worse condition than it would have been had the treatment been followed straight through to the end

Dr S Solis Cohen, Philadelphia Diabetes is common among the Jews, both rich and poor Tuberculosis is rare among rich Jews but quite frequent among the poor, and especially the Russians, but the proportion of cases of tuberculosis among the Jews is less than among those of other races under the same social conditions

Subacute and Chronic Nontuberculous Pulmonary Infections

Dr. J L Miller, Chicago These cases may be grouped into three types the subacute, the subacute with recurrences, and the chronic type Of the first type there were nine cases, characterized by mild onset, and slight febrile disturbances lasting about five days The expectoration was purulent, sometimes with hemoptysis There was no pain, and the physical signs were characteristic, and limited, as a rule to the lower lobe There was usually a slight impairment of resonance and diminished vesicular breathing, and moist rales over the entire lobe These cases usually present the physical signs of tuberculous infiltration I have seen evidences of consolidation Among these nine cases the fatal termination occurred in from four weeks to six months The physical signs might persist for two or three months and then disappear In all these cases the examination of the sputum for tubercle bacilli was consistently negative One of the characteristic and striking signs in these cases is the lack of evidence of pulmonary markings

There were six cases of the second type, much like the first type except that the condition recurred at intervals of several months or a year In one instance four recurrences were noted In each recurrence the signs and symptoms were the same and always in the same area In four, the roentgenogram was absolutely normal There were seven cases of the third type In these the signs never cleared up, though there were exacerbations in the symptoms In three cases, pain was present Pneumococci of Type 4 were found in four cases, and the *Streptococcus viridans* in three The number of bacteria were increased during exacerbations In the last type the roentgenogram showed in all increased mottlings, very marked in two Pleuritic adhesions were present in four cases The ages of these patients ranged from 1 to 60 years The subacute type predominated in the young people The seasonal incidence was the cold months In thirteen cases the left lobe was the seat of the lesion, in five the right lobe, in three both lobes, and in one right upper and left Cultures were taken in twenty-one cases, of which ten showed the pneumococcus of Type 4, eight the influenza bacillus, and three the *Streptococcus viridans* The Roentgen ray showed seven normal cases, ten with increased mottlings, and in the chronic type, four with adhesions There was one with effusion

DISCUSSION

Dr James B Herrick, Chicago I have had six cases of the subacute type with recurrences In one case there were five recurrences in as many years Roentgenoscopy revealed the same signs as in the subacute type In the chronic type there never seemed to be any clearing up There were exacerbations of the symptoms that were similar to the acute type with the recurrences I have had seven cases, three of which showed distinct pain In all seven cases, roentgenoscopy revealed similar changes In four there were evidences of pleuritic adhesions Recovery occurred within a few months in the subacute cases

Dr Nathan E Brill, New York In the first pandemic of influenza in 1888 and 1889, I saw these cases for the first time In most instances the lower left lobe was attacked, while in a few cases the left upper lobe, the right lobe, or both were affected

Dr H A Hare, Philadelphia Two or three years ago, I pointed out that there were no physical signs in these cases characteristic of tuberculosis It is important to recognize this

Dr Lawrason Brown, Saranac Lake, N Y We should prove that these cases are not tuberculous before discharging the patients I should like to know what the condition of the antrum and sinuses was in these cases

Dr J L Miller, Chicago Aside from coryza, there seemed to be no infection of the air passages

A Roentgenologic Study of Pneumoconiosis

Drs H R M Landis, H K Pancoast and T G Miller, Philadelphia We have examined thirty-seven potters and a number of cement workers Different kinds of dust produce different varieties of damage, and different individuals react differently to particular dusts The changes produced by organic dusts are quite definite Dusts have a tendency to collect at the junctions of the lymph channels, and the terminal stage is a fibrosis which is quite extensive During the first five years, practically nothing is shown, during the next ten years, the linear markings are more distinct, and at about the fifteenth year, they become quite distinct, and a diffuse fibrosis occurs There is also a marked dilatation of the bronchi

DISCUSSION

Dr George M Kober, Washington, D C It has been estimated that half of the deaths from tuberculosis occur among industrial workers The majority of workers who are exposed to dust of any kind continuously have some chronic disease of the respiratory tract, and many of them develop pneumoconiosis

Dr. W M L Coplin, Philadelphia I believe that chronic lymphangitis is back of this trouble Accompanying these lesions are bronchitis, edema of the skin, and a bronchial asthma In the latent, mild chronic or subacute there is a retardation of the lymph flow through the tissues

Dr Charles G Stockton, Buffalo Some years ago a case similar to these was described which was caused by the great amount of dust in an elevator I have since seen many of these cases due to the dust in elevators in which no precautions were taken to protect elevator men and no proper provision was made for ventilation The late cases go on to interstitial pneumonia occasionally with cavity formation and sometimes asthma These cases may be described as elevator pneumonias' of slow progress

Dr David L. Edsall, Boston It has been shown that where there has been a constant exposure to dust there is a proneness to chronic as well as to acute pneumonia The extraordinary thing about this exposure is the long period of time through which people may be exposed and apparently suffer no ill effects from it

Dr. H R M Landis, Philadelphia The fibrinous process tends to retard rather than to accelerate the progress of the disease

Aortic Aneurysm Treated by Wiring

Dr. Hobart A Hare Philadelphia In twenty-seven wirings the pain was allayed or relieved before the operation was complete As the expansible pulsation was simultaneously decreased the relief of the pain might be due to the relief of eroding pressure or to the sedative effect of the galvanic current In cases in which the aneurysm is the result of trauma the outlook is better than in those cases in which it is a manifestation of arterial disease It is essential not to mistake a fusiform aneurysm or a growth for a sacculated or false aneurysm The form of aneurysms suited to this procedure are the saccular ones The point of greatest bulging or giving way must be chosen The needle must be insulated properly and not pushed too far so as to cause an electrolytic burn The wire must be gold and platinum so as not to undergo electrolytic changes Gold and copper alloy is eaten through rapidly It is important that the wire have spring but it must not be too strong If silver wire is used it will not coil The positive pole must be in the sac If street current is used it must be reduced the operating table insulated and the surgeon's feet covered with rubber shoes The current must not be too strong One should start at 5 milliamperes and rarely go above 40 raising 5 every five minutes and gradually reducing it The current should never be broken The wire should be 28 B and S gage This procedure is not dangerous if carried out promptly

Occurrence of Bilirubin in the Plasma and in Other Body Fluids

Drs M A Blankenhorn and C F Hoover Cleveland Four hundred specimens of blood plasma obtained free from hemolysis were examined for bilirubin bile salts and urobilin, and a smaller number for cholesterin The findings were correlated with an examination of the urine and the appearance of the skin In 153 cases there was cholemia without choluria Bile salts were found in the urine in 102 instances In 133 cases examined for urobilin in the blood twenty-two were positive the urobilin being present in large amounts Often we found urobilin in the urine and not in the blood In Laennec's disease of the liver cholemia was found without choluria Cholelithiasis was not demonstrable

Causation and Curability of Certain Long-Standing Albuminurias

Dr. David Riesman Philadelphia Cases of long-standing albuminuria should not be considered as incurable Albuminuria may be kept up by the presence of stone or of some offending foci When patients are cured of such albuminurias, they usually continue to live for years

DISCUSSION

Dr Theodore C Janeway, Baltimore Posture is one of the most significant causes of albuminuria 'Orthostatic albuminuria is an incorrect term It is often difficult to say whether or not the postural albuminuria is the only condition present It has been stated that in many of these cases if the patients are put to bed for three quarters of an hour the albuminuria cleared up This is a mistake for the kidneys do not recover with such rapidity It has been found that when patients run about they do not have albuminuria, but when they stand still they have it One patient presenting albuminuria and hyaline casts in the urine was shown to have a stone. With the removal of the stone there was a disappearance of the albumin and casts Another interesting case was that of a man who was refused by a life insurance company because of showers In the afternoons he took up boxing and albumin and casts later appeared in the urine I saw the man thirty years after this discovery was made

Dr William S Thayer, Baltimore I recall one patient 14 or 15 years of age who was brought to me with the suggestion that a warm climate was best for him He was suffering from an infection from adenoids and tonsils Tonsillectomy and removal of the adenoids caused the symptoms to disappear Albuminuria sometimes follows cold bathing in the morning

Dr Leonard G Rowntree Minneapolis I recall the case of a man who was normal except for the presence of albumin and a few casts This man had bad tonsils There has been an immense improvement since the diseased tonsil was treated

Dr Milton H Fussell, Philadelphia One great difficulty when we find foci of infection in the teeth is to know just what kind of treatment to employ

Elimination of Uric Acid in Gout and Other Forms of Arthritis

Drs Joseph H Pratt and C W McClure Boston Retention and delayed excretion of uric acid occurs in other diseases as well as in gout A retarded and diminished excretion of uric acid is probably not an essential factor in the product of gout Injected uric acid remains in the blood of gouty patients longer than in the blood of the nongouty Some impairment of renal function is found in all cases of gout studied by the newer methods

DISCUSSION

Dr. Llewellys F Barker Baltimore The majority of cases diagnosed as gout at the spas are not cases of gout at all but of an infectious arthritis or an osteoarthritis The unreliability of the methods of studying uric acid must be emphasized I think the evidence favors the view that in gout renal insufficiency is at fault as regards the excretion of uric acid

Dr Joseph H Pratt Boston As to the endogenous output if the diet is purin-free the uric acid is low It is important that observations should be made on young persons

Influence of Pituitary Solution on the Urinary Excretion in Diabetes Insipidus

Drs Lewellys F Barker and Herman O Mosenthal Baltimore In a patient who was suffering from diabetes insipidus the urinary output could be reduced from 8 to 10 liters in twenty four hours to a normal output and the specific gravity could be increased correspondingly The effect of each injection was marked for about four hours Single injections though the dose was large had little effect The minimum dose was 1 c c and more than two injections seemed to give no additional advantage

DISCUSSION

Dr J L Miller Chicago Pituitary solution in either normal or diseased persons causes a reduction in the urinary output Following an injection of 5 c c of pituitary solution a man had a terrific headache - For the first time in eight years he was not compelled to rise at night to urinate Intramuscular injections were given without effect The posterior lobe was effective in these cases

Dr Thomas B Futcher, Baltimore A point to be emphasized is that injury to the pituitary gland may result in diabetes insipidus Pituitary solution increases the output of the urine and the specific gravity, and also the ability of the urine to concentrate salt and nitrogen Cushing's observations on the pituitary gland are of interest In twelve out of 100 cases of pituitary tumor there was an increased flow of urine Many of these patients had a marked polyuria and six came to necropsy with the diagnosis of diabetes insipidus

Dr. S Solis Cohen, Philadelphia I recall two cases of diabetes insipidus One patient, a man, aged 30, in addition to passing large quantities of urine, complained of severe pain in the left hypochondrium Pituitary solution caused the urine to clear up, but the pain continued An adhesion was found between the colon and the stomach the cause of which was not evident These adhesions were liberated, and the urinary output fell from 11 or 17 liters a day to 2 liters The second patient, a girl, aged 18 or 19, had a urinary output of 8 liters a day After the administration of pituitary solution it fell to 2 liters a day

Dr Henry Koplik, New York I have been able to collect reports of three cases of diabetes insipidus so far It is difficult to separate the two classes of cases This new therapy is applicable to a certain set of cases

Dr Lewellys F Barker, Baltimore The observation of the Majos is true, that where there is an inability to secrete urine without some form of therapy, pituitary solution had been found to be effective in overcoming this inability In the hereditary cases there is something at fault, the pars intermedia seems to be the actual site of the disease in diabetes insipidus In cases in which the posterior lobe has been destroyed, substitution therapy must be carried out as long as the patient lives

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Diseases of Children, Chicago

June, XIII No 6

1 *Occlusion of Aqueduct of Sylvius in Relation to Internal Hydrocephalus M G Schlapp and B Gere, New York—p 461
2 *Diagnosis of Spinal Cord Tumors in Childhood Report of Case of Tuberculoma of Cerebrum and Spinal Cord R L. Ash, San Francisco—p 487
3 Physiology of New Born Infant F B Talbot, Boston—p 495
4 Use of Longitudinal Sinus for Diagnostic and Therapeutic Measures in Infancy A Brown and G E Smith, Toronto, Canada—p 501
5 Prodromal Symptoms of Infantile Paralysis. M G Wilson, New York—p 506
6 Posterior Basic (Walled Off) Meningitis Report of Case with Recovery A. Sophian, Kansas City, Mo—p 514

1 **Internal Hydrocephalus**—The results of the clinical, postmortem and histologic investigations in eight cases of internal hydrocephalus of the obstructive type are studied by Schlapp and Gere, bringing special emphasis to bear on the obliterating lesion of the aqueduct of Sylvius as a cause of ventricular distention Of this group, examined without selection, all showed either complete occlusion of the aqueductus cerebri or obliteration of the fourth ventricle through severe pathologic changes occurring in the ependymal or subependymal tissues of these regions Reviewing the facts in these cases the authors arrive at the conclusion that it is not unreasonable to attribute many, if not the majority, of cases of the congenital form of this disease to closure of the aqueduct of Sylvius through proliferation of the glia and ependymal tissues, or to invasion of the fourth ventricle by tumors having their origin in the floor, the choroid plexus or the membranous roof of the ventricle Those cases, also, developing acutely in previously healthy adults and older children, and which have shown microscopically the same pathologic changes, may have been brought about in the same manner, namely, through the stimulation by some chemical poisoning of a tissue which is embryologically defective. In cells which have become highly specialized, as the nerve cell, gland cell and muscle cell, the potential energy of the cell body is converted into the predominating activity, and the formative process is held in abeyance, and, so long as the normal relation between synthesis and catalysis is maintained, functional activity of the cell remains in a state of constancy On the other hand, in those cells not highly specialized, as the ependymal, glia and the connective tissue cells, formative activity is easily awakened, and so it happens that in many cases of hydrocephalus, stimulation of these cells by some irritating substance results in an active proliferative process involving the ependyma and the subependymal tissues of the aqueduct of Sylvius, as seen in the obliterative glioses which figure conspicuously in the authors' cases

2 **Spinal Cord Tumors**—Of special clinical interest in Ash's case was the fact that a tumor of the spinal meninges, which was diagnosed during life, was the first manifestation of a generalized tuberculosis in a child of 19 months Xanthochromia with massive spontaneous coagulation and pleocytosis was an attending syndrome

American Journal of Insanity, Baltimore

April LXXIII, No 4

7 Social Service in State Hospital G M Kline, Hathorne, Mass—p 567
8 Psychosis Presenting Schizophrenic and Freudian Mechanisms with Schematic Clearness C C Wholey, Pittsburgh—p 583
9 Psychanalytic Tendencies W A White, Washington, D C—p 599
10 Psychiatric Aspects of Pellagra W C Sandy, Columbia, S C—p 609
11 Manic Depressive Psychosis in Negro E M Green, Milledgeville, Ga—p 619
12 Manic Depressive and Dementia Praecox Psychoses, Their Differential Symptomatology H H Drysdale, Cleveland—p 627
13 Psychology of Hysteria W G Somerville, Memphis, Tenn—p 639
14 Dreams and Their Interpretation R Armstrong Jones, London—p 655
15 Reception, Examination and Care of New Admissions C G Wagner, Binghamton, N Y—p 673
16 Biologic Aspects of Dementia Praecox F W Langdon, Cincinnati—p 681
17 War and Neurosis. C B Farrar, Canada—p 693
18 Psychoneuroses, Psychoses and Mental Deficiency in Two Thousand Cases Considered Especially from Standpoint of Etiologic Incidents and Sex A Gordon, Philadelphia—p 721

American Journal of Public Health, Boston

May, VII No 5

19 Statistical Study of Diphtheria F S Crum, Newark, N J—p 445
20 U S Army Methods of Disposal of Camp Refuse J M Phalen—p 481
21 Examination of Recruits for Army and Militia H D Orr, Chicago—p 485
22 Principal Defects Found in Persons Examined for Service in United States Navy C A Costello—p 489
23 Dispensary Problems of Gonorrhea and Syphilis A N Thomson, New York—p 493
24 Maine's New Health Law C E Turner—p 502

Archives of Internal Medicine, Chicago

May, XIX Part II No 5

25 *Clinical Calorimetry Basal Metabolism of Old Men J C Aub and E F Du Bois, New York—p 823
26 *Id Effect of Caffein on Heat Production J H Means, Boston, J C Aub, E F Du Bois and G F Soderstrom, New York—p 832
27 *Id Basal Metabolism of Dwarfs and Legless Men Specific Dynamic Action of Protein J C Aub and E F Du Bois, New York.—p 840
28 *Id Respiratory Metabolism in Nephritis J C Aub, E F Du Bois and G F Soderstrom, New York—p 865
29 *Id Effect of Roentgen Ray and Radium Therapy on Metabolism of Patient with Lymphatic Leukemia J B Murphy J C Aub, New York, and J H Means Boston—p 890
30 *Id Metabolism in Three Unusual Cases of Diabetes F C Gephart J C Aub, E F Du Bois, G Lusk and G F Soderstrom, New York—p 908
31* Id Water Elimination Through Skin and Respiratory Passages in Health and Disease G F Soderstrom and E F Du Bois, New York—p 931

25 **Metabolism of Old Men**—A group of six men between the ages of 77 and 83 were studied in the calorimeter by Aub and Du Bois Their average basal heat production was 35 1 calories per square meter per hour, which is 12 per cent below the average for men between the ages of 20 and 50 The methods of direct and indirect calorimetry agreed closely and the respiratory quotients were all within normal limits

26 **Caffein and Heat Production**—An increase of from 7 to 23 per cent in the basal metabolism was found in four normal subjects after receiving 8 to 10 grains of caffein alkaloid (8 6 mg per kg of body weight) After taking the drug there was no significant change in the pulse rate, in the respiratory quotient, in the proportions of the various foodstuffs metabolized or in the percentage of heat lost in the vaporization of water The independent methods of direct and indirect calorimetry gave results which agreed within 1 per cent

27 **Metabolism of Dwarfs and Legless Men**—The basal metabolism of five dwarfs, two legless men and six normal

controls is reported by Aub and Du Bois The legless men and the dwarfs with apparently normal endocrine systems, showed in relation to their surface area, the same level of metabolism as normal men The law of surface area holds good for men of unusual body shape The dwarfs with involvement of the ductless glands and symptoms of cretinism showed a marked reduction in metabolism below the average found in normal cases

28 **Respiratory Metabolism in Nephritis**—Five patients suffering from nephritis of the chronic interstitial type without edema were studied by Aub and Du Bois One with marked uremia was at the normal level *of metabolism* Another who was very restless showed an increase A third in whom hyperthyroidism was suspected, also showed an increase The other two were near the upper normal level of metabolism In most of the patients with greatly increased blood pressure the metabolism was higher than in the other nephritics with lower blood pressures Most of the patients with marked dyspnea showed some increase in metabolism No relationship could be established between the level of metabolism and the degree of acidosis or the eliminative power of the kidney

29 **Metabolism in Leukemia**—A man aged 59 with chronic lymphatic leukemia was studied five times in the respiration calorimeter When first observed his metabolism was 44 per cent. above the average normal falling a little with rest in bed Intensive treatment with Roentgen rays caused a drop in the leukocyte count but did not appreciably affect the level of his metabolism. The water elimination through skin and respiratory passages was unusually high Direct and indirect calorimetry gave total results which were almost identical and no abnormal respiratory quotients were found After treatment with radium a further and very marked fall occurred in the leukocyte count and at the same time, a slight fall occurred in the basal metabolism

30 **Metabolism in Diabetes**—Three cases of diabetes studied in the respiration calorimeter are reported Case 1, a diabetic woman through prolonged fasting had been brought to a level of metabolism 37 per cent. below the standard level for her height and weight a metabolism which was only 40 per cent. of the original normal value before the initiation of fasting This is the lowest level of metabolism ever recorded Case 2 a patient with a mild case of diabetes, whose urine was free from sugar became suddenly and completely diabetic on the administration of a high protein-fat diet, and on fasting rapidly regained his former tolerance for sugar Case 3 an acute case of complete diabetes which in high protein metabolism and in high D N ratios resembled experimental diabetes in animals. When given meat and fat the patient not only excreted all the sugar derivable from protein but he also excreted all the beta-oxybutyric acid derivable from the fat metabolism of the time Two months later when the metabolism was 35 per cent below the normal for his height and weight two-thirds of the total calories were derived from carbohydrate

31 **Water Elimination in Health and Disease**—According to Soderstrom and Du Bois the output of water is very little affected in disease When the heat production is increased the body responds and dissipates the usual percentage of calories in the vaporization of water When it is necessary to get rid of unusual amounts of heat the percentage lost in vaporization is increased

Arkansas Medical Society Journal, Little Rock

May VIII No 12

32 Social Problems of Feebleminded A W Stearns Boston—p 249
33 Epididymotomy S P Bond Little Rock—p 250
34 Syphilis of Nervous System C L. Gregory, Greenville Texas—p 251

Boston Medical and Surgical Journal

May 24, CLXXVI No 21

35 Arteriosclerosis with Special Reference to Diet. L. F Bishop, New York—p 721
36 Study of Twenty Nine Cases *of* Echinococcus Disease at Massachusetts General Hospital L. Davis and G M. Balboni Boston—p 726
37 *Mental States Responsible for Malingering* F B Emerson Bridgewater—p 736
38 Traumatic Injuries of Kidneys I Warner, Columbus—p 740
39 Measles D M Lewis, New Haven, Conn—p 742

36 **Echinococcus Disease**—In the last three years the echinococcus complemental test has been used at the Massachusetts General Hospital Ninety-seven tests in all have been made Twelve were positive and eighty five were negative Of the twelve positive cases seven proved to be echinococcus disease One of the five other patients at operation showed an abscess in the abdominal wall, which on microscopic examination showed no evidence of tuberculosis Its appearance was not inconsistent with echinococcus cyst One had clinically a large spleen and liver, a positive Wassermann reaction and was not operated on Three were clinically syphilitic and had weak *to strongly* positive Wassermann reactions Among the eighty-five negative cases twenty-four had a positive Wassermann reaction The Wassermann reaction was negative *in five of the proved* echinococcus infections It was not done in the remaining two There was some variation in the strength of the echinococcus reaction in the same patient from time to time The cyst fluid proved a better antigen than the alcoholic extract of the cyst wall The cyst fluid was found active as an antigen after more than eighteen months outside of the body The cysts were *located in the liver alone in sixteen, in five* cases other parts as well as the liver were involved, namely, peritoneal cavity twice omentum lung and kidney once each *In the other eight cases the cysts were found in the brain* heart and pericardium once, kidney twice, peritoneum once, gastrohepatic omentum once and retroperitoneal twice In one case echinococcus cysts were passed in the feces, in another with the urine

Bulletin of Lying-in Hospital City of New York

May XI No 2

40 Thrombosis of Cerebral Sinuses and Veins as Complication of Puerperium J R Hunt, New York—p 73
41 Appendiceal Abscess with General Peritonitis by Streptococcus Viridans. J W Markoe New York—p 80
42 Case of Full Term Abdominal Pregnancy with Macerated Fetus *and Streptococcus Infection of Sac and of Uterus* A B Davis New York—p 83
43 Birth Control G W Kosmak, New York—p 88
44 Severe Case of Pyelonephritis with Colon Bacillus Infection of Blood Complicating Pregnancy R. McPherson and J K Losee New York—p 100
45 Five Cases of Ectopic Gestation J W Markoe, New York—p 104
46 Follow Up System in Obstetrics J A Harrar, New York—p 109
47 Routine Use of Cathartics During Puerperium R McPherson, New York—p 118
48 Atrophy of Kidney Following Spontaneous Ureterosigmoidal Fistula. C I Jellinghaus New York—p 120
49 Puerperal Hysteria Pregnancy Toxemia or Acute Poliomyelitis J A Harrar New York—p 123
50 Case of Twin Pregnancy in Bicornuate Uterus. M Rosensohn, New York—p 125
51 Functions of State Medical Association Journal C W Kosmak New *York*—*p* 126.
52 Feeding of New Born R H Dennett New York—p 130
53 *Phenolsulphonephthalein Test in Pregnancy* M K Smith, New York—p 134
54 Case of Typhoid in Pregnancy H M Ratliff New York—p 142

40 **Thrombosis of Cerebral Sinuses**—Hunt reports the case of a primipara, 21 years old who on the twentieth day, after an apparently normal delivery *and puerperium*, was seized with severe headaches, vomiting and general convulsions The convulsive seizures continued and were both general and jacksonian in type Paralysis of the right side of the face right arm and motor aphasia supervened The patient gradually sank into a stupor and succumbed on the tenth day of the disease Necropsy showed extensive thrombosis of the dural sinuses the superior longitudinal, lateral and petrosal sinuses also thrombosis of the cerebral veins with extensive hemorrhagic softening of the cerebral cortex, especially marked over the frontoparietal region The histologic picture was one of hemorrhagic softening, without evidences of arterial disease or inflammation The liver and kidneys were congested, otherwise normal Diagnosis Thrombosinusitis and thrombophlebitis with consecutive

hemorrhagic softening in the distribution of the occluded veins

41 **Appendiceal Abscess Caused by Tooth Infection**—A case of appendiceal abscess is cited by Markoe in which he believes the infection came from the roots of the teeth The culture from the pus evacuated from the peritoneal cavity at the time of operation was pure culture of *Streptococcus viridans*

47 **Cathartics During Puerperium.**—The value of catharsis during the puerperium was studied by McPherson in a large series of cases Each patient was alternately placed in Ward A or Ward B as she came from the delivery room The patients in Ward A had no catharsis administered at all, while to those in Ward B the usual routine with the various preparations in ordinary use was given In the noncatharsis cases three days were allowed to elapse, and if no bowel movement occurred, a low saline enema was given, the patient's bowels then not disturbed until three more days had passed by, when another saline enema was given This was continued until she was discharged from the hospital The results were most interesting Three hundred and twenty-two patients of each class were carefully observed, of the 322 cases to whom cathartics were administered, twenty-eight had fever at some time during the puerperium, fever being considered present when the patient had two consecutive temperatures of over 100 4 during the puerperal period Of the 322 who received no catharsis only three had fever and one of these had a mammary abscess The cases were in no way selected, the delivery technic was in all cases the same and by the same operators The number of women who of themselves had a bowel movement normally without assistance every second or third day was fairly large, in none of the cases not receiving cathartics were there foul breaths, headaches, coated tongues breast complications or the other time honored sequelae which are supposed to occur after a day or two of constipation McPherson emphasizes the danger and uselessness of routine drugging and the assigning of certain effects to conditions which have not been shown to be the cause of the symptoms exhibited

Canadian Medical Association Journal, Toronto

May VII No 5

55 Remote Symptoms from Lesions of Prostate and Deep Urethra T McCrae Philadelphia—p 385
56 Diagnosis of Tumors in Upper Zone of Abdomen A McPhedran Toronto—p 393
57 Acute Abdomen F N G Starr, Toronto—p 399
58 Nitrous Oxid Oxygen Analgesia and Anesthesia in Obstetrics G G Copeland Toronto—p 405
59 Analysis of Three Thousand Cases of Obstetrics S P Ford Norwood—p 412
60 Heliotherapy in Abdominal Tuberculosis J H Elliott, Toronto—p 420
61 Gastric and Duodenal Ulcers, Report of Cases A Moir—p 426
62 Transfusion in Ruptured Ectopic Pregnancy N H Beal, London, Ontario—p 440

Colorado Medicine, Denver

May XIV No 5

63 Postoperative Paralytic Ileus Report of Cases O S Fowler Denver—p 128
64 Tuberculosis of Retinal Vessels with Recurring Hemorrhages and Proliferating Retinitis F R Spencer, Boulder—p 134

Indiana State Medical Association Journal, Fort Wayne

May X No 5

65 Why Belong to Medical Society? G F Keiper Lafayette—p 181
66 *Conservatism in Cesarean Section J W Shafer, Lafayette—p 186
67 Relation of Cow's Milk to Human Tuberculosis W Shimer, Indianapolis—p 193

66 Abstracted in The Journal, Oct 21, 1916, p 1250

Journal-Lancet, Minneapolis

May 15 XXXVII No 10

68 Omentum, Its Physiologic Value and Need of Its Preservation C H Mayo, Rochester—p 321
69 Clinical Signs in Diagnosis of Obscure Forms of Syphilis of Nervous System A S Hamilton, Minneapolis—p 324
70 Artificial Vagina J E Engstad, Minneapolis—p 329
71 New Methods of Operating for Difficult Herniae A T Mann Minneapolis—p 331
72 Duty of Physicians and Enforcement of Law in Minnesota in Relation to Reporting Births G C Pierson St Paul—p 337

June 1, No 11

73 *Abdominal Surgery Under Local Anesthesia R E Farr, Minneapolis—p 353
74 Duodenal Diverticula Report of Case Associated with Duodenal Ulcer H P Ritchie, St Paul, and G L McWhorter, Minne apolis—p 361
75 Recent Advances in Knowledge of Active Constituent of Thyroid Its Chemical Nature and Function E C Kendall, Rochester—p 366
76 *Histopathology of Autonomic System in Goiter L B Wilson, Rochester—p 368
77 *Tuberculosis of Spine, End Results of Operative Treatment M S Henderson, Rochester—p 371

73 and 77 Abstracted in The Journal, Dec 2, 1916 p 1694
76 Abstracted in The Journal, Nov 25, 1916, p 1625

Kansas Medical Society Journal, Topeka

May XVII No 5

78 Perversions of Metabolism, Consideration of Causes, Effects and Treatment H J Stacey, Leavenworth—p 122
79 Infantile Diarrhea M Hahn, Arkansas City—p 127
80 Case of Hypertrophied Prostate T G Orr, Rosedale—p 130

Laryngoscope, St. Louis

April, XXVII No 4

81 Index Medicus and Digest of Otolaryngology for 1916

Maine Medical Association Journal, Portland

May VII No 10

82 Fractures of Spine E G Abbott, Portland—p 307
83 Necrology W P McIntosh—p 319

Medical Record, New York

May 26 XCI No 21

84 Maternity Insurance as Means to Lessen Disease and Death Rate of Mothers and Children S A Knopf, New York—p 881
85 Histopathologic Findings in Two Cases of Subacute (Combined) Cord Degeneration G B Hassin, Chicago—p 885
86 Epidemic Nasal Sinusitis, "Influenza" and "Grippe" Its Misnomers J J Hurley, Boston—p 890
87 Retinal Manifestations of Chronic Bright's Disease G W Vandegrift, New York—p 893
88 Some Quondam Conceptions Pertinent to Otorhinology J A Hagemann, Pittsburgh—p 895
89 Damaged Goods M H Cazier, New York—p 897

New York State Journal of Medicine

May XVII No 5

90 Diagnosis and Choice of Operation in Certain Affections of Stomach and Duodenum J M T Finney, Baltimore—p 203
91 Modern Hospital Its Form, Function and Work. H A Christian, Boston—p 210
92 Irreducible Minimum of Care and Asepsis in Every Day Obstetrics in Tenements. J W Markoe, New York—p 214
93 Cooperation in Medicine M B Tinker, Ithaca—p 218

Nebraska State Medical Journal, Norfolk

April II No 4

94 Blood Transfusion J S Welch, Lincoln—p 277
95 Choice of Donor in Blood Transfusion G W Covey, Lincoln—p 280
96 Public School in Relation to Epidemics J M Patton, Omaha—p 281
97 Two Cases of Surgical Infantile Paralysis H W Orr, Lincoln—p 285
98 Case of Jaw Fracture, Treated by Means of Interdental Splint C H Breuer, Lincoln—p 289
99 Health Work and Rural Sanitation C F Chapman Lincoln—p 295
100 Epidemiology of Anterior Poliomyelitis M W Richardson—p 297

New York Medical Journal

May 26 CV No 21

101 Ductless Glands in Cardiovascular Diseases and Dementia Praecox C E de M Sajous, Philadelphia—p 961
102 Vegetative Nervous System and Dementia Praecox S E. Jelliffe New York—p 968
103 Truth About Electrotherapeutics. W L Clark, Philadelphia—p 971
104 Six Cases of Dysphagia and Dysphonia of Dental Origin T J Harris, New York—p 975
105 Surgical Aspects of Male Sterility A. L. Wolbarst, New York—p 976
106 Treatment of Diseased Nasal Sinuses and Ears by General Practitioner W Ferguson, New York—p 979

107 Constructive Health Program for Urban Schools I H Goldberger New York—p 982
108 Mercuric Chlorid Test for Diagnosis of Syphilitic Infection E C Birge Jacksonville Fla and J R Bean Birmingham, Ala—p 986
109 Statistical and Clinical Survey of Five Hundred and Ninety One Genito-Urinary Cases A Strichstein, New York—p 987
110 Pyloric Obstruction and Thymus Disease in Infant R L Pitfield Philadelphia—p 988

Pennsylvania Medical Journal, Athens

May XX No 8

111 *Habitual Dislocation of Ulna, Report of Case M Behrend Philadelphia—p 533
112 Limitations and Advantages of Localized Anesthesia H I Smith Harrisburg—p 535
113 Closure of Fecal Fistula by Extraperitoneal Method C F Nassau, Philadelphia—p 537
114 Relation of Rectum to Functional Abdominal Disturbance F Laplace Philadelphia—p 540
115 Chronic Ulcer of Stomach and Duodenum Study of Twenty Five Operative Cases H B Gibby Wilkes-Barre—p 542
116 Cooperation of Physician and Surgeon in After-Treatment of Patients Operated on for Diseases of Gastro-Intestinal Tract E H Goodman and J Speese, Philadelphia—p 546
117 Hydrophthalmos Report of Case H M Becker, Danville—p 547
118 Diagnosis and Treatment of Chronic Intestinal Indigestion in Children R K Rewalt Williamsport—p 551

111 **Habitual Dislocation of Ulna**—Behrend cites a case in which in certain movements the ulna would be dislocated about three fourths inch posterior The author remedied this condition as follows A one-fourth inch incision was made over the styloid process of the ulna a drill used to bore a hole transversely through the ulna and radius, and a tenpenny wire nail hammered into the opening made by the drill Great care was exercised to avoid entering the joint While this operation fixes the ulna to the radius as a matter of fact normally the extreme lower portions of the ulna and radius move more slightly in pronation and supination In Behrend's case motion has been very little interfered with Pronation is perfect but supination cannot be completely performed The patient has good use of his arm and has returned to his original occupation that of chauffeur A point of considerable interest is the fact that the anatomic relations have been preserved

113 **Closure of Fecal Fistula by Extraperitoneal Method**—Nassau dissects the abdominal wall away from and close to the fistula layer by layer A circular incision is made close around the fistulous tract very much in the same way as one circumscribes the tract of a fistula in ano Under ideal conditions after going through the edges of the retracted muscular layer one comes down on a layer consisting of the following fused structures transversalis fascia, parietal peritoneum and the peritoneal covering of the bowel When the operation has gone nicely sometimes a little cone-shaped process of cecum can be pulled up into the wound, without having opened into the general peritoneal cavity The fistula is now amputated in exactly the same way that one deals with an appendiceal stump The tract is crushed and tied off close to the bowel wall This small area of the wound is wiped out with a little pure alcohol on a sponge The essential part of the operation is the folding in of the wall of the bowel by row after row (usually three rows being employed) of a No 0 chromicized catgut suture

116 Abstracted in The Journal, Oct 14 1916, p 1181

Public Health Journal, Toronto

May VIII No 5

119 Birth Control in Its Medical Social Economic and Moral Aspects. S A Knopf New York.—p 117
120 Life in Lumber Camps of Northern Saskatchewan J H Symons.—p 136

South Carolina Medical Association Journal, Greenville

May XIII No 5

121 Necessity of Routine Genito-Urinary Examinations in Practice of Medicine and Surgery M Weinberg Sumter—p 536
122 Health Education in Rural Districts L A Riser Columbia—p 538
123 Psychiatry and General Practitioner W C Sandy Columbia—p 540
124 Report of Series of Three Hundred Cataract Operations. C W Kollock Charleston—p 544
125 Presenting Symptoms in Three Hundred Consecutive Cases of Syphilis R H Lafferty and S R Thompson, Charlotte, N C—p 548
126 Exophthalmic Goiter S O Black Philadelphia—p 551
127 Diverticulitis of Appendix J H Taylor Columbia—p 555

Southwest Journal of Medicine and Surgery, El Reno, Okla

May XXV No 5

128 Involvement of Central Nervous System in Primary and Secondary Stages of Syphilis D D Paulus, Oklahoma City—p 113
129 When Is Curettage of Uterus Justifiable in Obstetric Practice and How to Do It J W Wilhoit, St George—p 122
130 Operation on Uterus H A Lowe Springfield Mo—p 129
131 Influence of Build on Longevity W M Brumby, Waco Texas.—p 132

Surgery, Gynecology and Obstetrics, Chicago

June XXII No 6

132 Transplantation of Ureter Following Traumatism and Resection of Bladder for Cancer E S Judd Rochester Minn—p 635
133 Some Aspects of Renal Surgery J B Squier New York—p 641
134 Surgical Treatment of Benign Neoplasms of Bladder E Beer New York—p 646
135 Id F Martin Philadelphia—p 648
136 Diagnosis of Ureteral Diseases with Their Surgery B Lewis St Louis—p 649
137 Infections of Bladder with Special Reference to Localized Resistant Areas of Cystitis J T Geraghty Baltimore—p 655
138 *Bladder Changes Due to Lesions of Central Nervous System J F Burns Baltimore—p 659
139 Early Diagnosis of Renal Tumor Report of Five Cases F Hinman San Francisco—p 669
140 Tuberculosis of Thyroid R F Mosiman, Cleveland—p 680
141 Partial Gastrectomy in Treatment of Chronic Indurated Ulcers of Stomach L Sierra Santiago, Chile—p 694
142 Congenital Radio-Ulnar Synostosis W W Feidt, Minneapolis—p 696
143 Growth of Free Bone Transplants T Todyo Seattle—p 701
144 Congenital Genu Recurvatum L D Prince, San Francisco—p 714
145 Acute Inflammation of Neck of Femur Report of Three Cases J E Moore Minneapolis—p 725
146 Results of Surgical Treatment of Gastric Ulcer D C Balfour, Rochester Minn—p 731
147 General Rules Used in Simple Plastic Work on Austrian War Wounded Soldiers J F S Esser, Arnhem Holland—p 737
148 Free Muscle Tendon Bone Transplantation for Old Fracture of Patella W M Brickner New York—p 749
149 Vertebral Fracture with Luxation Transplantation of Bone H P Cole Mobile Ala—p 751

132 Abstracted in The Journal, Jan 27, 1917, p 308

134 **Surgical Treatment of Benign Vesical Neoplasms**—Beer again places emphasis on the fact that all benign papillomata that are suitable cases for cystoscopic high frequency cauterization—and these constitute the great majority—can be definitely cured by this method Those few cases that cannot be so treated must be operated on and usually will be cured definitely, if the Paquelin cautery technic outlined by him is followed The important features of this new technic are mainly directed against the danger of breaking off pieces of viable growth which may lead to recurrences For this purpose the intravesical operation is done entirely with the Paquelin (hooked point) cautery, the bladder is not filled with fluid before opening it, the incision in the bladder is gradually enlarged without any sponging or any rough handling and each tumor as it presents is burned to a crisp, every suspicious spot in the bladder is burned, and the edges of the opening in the bladder are similarly treated Finally the whole operative field is thoroughly soaked in alcohol to destroy any particles of viable growth that might have accidentally broken off during the manipulations The Paquelin may be so used within the bladder for the greater part of an hour without causing any more postoperative discomfort than is usually seen after a suprapubic cystostomy

138 **Bladder Changes Due to Lesions of Central Nervous System.**—The chief changes in the bladder due to lesions of the central nervous system, according to Burns, consist in diminution in the tone of its musculature and that of the internal vesical sphincter As a result of such loss of tonicity, there is often a gradual accumulation of residual urine and in some instances a dilatation of the bladder Incontinence occurs in a large majority of the cases In cases in which this exists there is a dilatation of the internal vesical sphincter and a funnel-shaped posterior urethra which is readily

demonstrated cystoscopically and roentgenographically The incontinence may be a true paradoxical incontinence due to the gradual accumulation of residual urine and overdistention of the bladder, or it may be due directly to a relaxation of the internal vesical sphincter and the neighboring urethral muscles In the latter type there is usually no residual urine present The trabeculation of the bladder wall, although generally present, seems to be rather inconstant in its distribution The trigon is usually found to be atrophic The cystoscope as a rule can be drawn into the posterior urethra and the verumontanum and intra-urethral portions of the lateral lobes of the prostate easily seen The most effectual form of treatment in these cases consists of intravenous and intraspinal therapy combined with dilations of the urethra This has been carried out in twenty-one cases (the histories of nine of these cases are detailed), when the lesion of the central nervous system was due to syphilis Of the twenty-one cases, sixteen gave a history of previous syphilitic infection, seven had a positive blood Wassermann on admission and in fourteen the blood Wassermann was negative The spinal fluid Wassermann was positive in twenty of the cases on admission, and in nine is negative at the present time Nineteen of the cases had intraspinal treatment, in seven of these it was combined with intravenous therapy and in eight with dilations of the urethra In one case intravenous treatment alone was given

140 **Tuberculosis of Thyroid** —Nine cases are reported by Mosiman The age incidence of the nine cases was 33 years the youngest being 18 years and the oldest (patient with malignancy and tuberculosis) 60 years The average duration of goiter was fifteen months, the longest duration of goiter was sixteen years One patient had not noticed goiter at all Nervousness was complained of by seven patients, the shortest duration being two months and the longest seven and one-half years Seven patients complained of palpitation, three had dyspnea, one having had it for eight years Two patients had exophthalmos, two gave a history of tuberculosis, and three had pleurisy Fainting spells had been present in three cases On physical examination, six patients had enlarged hearts, one had a friction rub at the left lower back, two had exophthalmos, seven had a marked tremor, and six showed a loss of weight during the past year The average bood pressure of the nine cases, on admission, was 145 millimeters mercury, on discharge was 129 millimeters of mercury Four patients had had treatment (?), two had had rest, one had had digitalis, and three had had iodin, in one case applied locally

The operation on all patients was a partial resection of the right, median, and part of the left lobes of the thyroid gland Two patients had a ligation of one of the superior thyroid arteries, this giving an index of the clinical severity of the disease All but two of the cases were diagnosed clinically as "exophthalmic goiter" One case was diagnosed "sarcoma," clinically One case "hypertonus" In no case was tuberculosis of the thyroid gland mentioned in the clinical diagnosis, nor was tuberculosis suspected in the gross specimen after operative removal

143 **Growth of Free Bone Transplants** —Todyo's investigation has convinced him that the aperiosteal transplant grows and regenerates by the proliferation of cells in the subperiosteal layer But in such a case the new growth of bone is not so active as in the transplants with periosteum The aperiosteal transplant acquires a new periosteum

Todyo says that the aim of the bone transplantation can be reached without the periosteum and marrow of the recipient As to the continued life of the transplanted bone however, he cannot give a definite opinion at this time Transplanted bone grows, the increase in thickness is marked, although the length increases but little even when transplanted with the epiphyseal line

146 **Results of Surgical Treatment of Gastric Ulcer** —The conclusions drawn by Balfour are based on 677 gastric ulcers operatively demonstrated in the Mayo Clinic during the past ten years He says that for ulcers at the pylorus, posterior gastro-enterostomy is the operation of choice in the poor surgical risk, for although pylorectomy is followed by better results, the operative mortality is distinctly higher The cautery is a useful adjunct in selected cases For ulcers on the lesser curvature, cautery by the method described in a previous paper and gastro-enterostomy is the operation of choice Local excision alone of such ulcers is inadequate, 32 per cent of patients so operated on ultimately requiring further operative treatment, viz, gastro-enterostomy Sleeve or segmental resection, especially in large high ulcers and hour-glass contraction in suitable cases is not only a relatively safe operation but has been followed by good results The lowest operative mortality in the more common operations was associated with cautery and posterior gastro enterostomy Ulcers on the posterior wall are associated with the highest operative risk, while those at the pylorus are of least risk

Vermont Medicine, Rutland

May, II, No 5

150 Opportunity and Medical Research J S Horner West Pawlet —p 113
151 Peroral Endoscopy Report of Two Cases. W G Ricker, St Johnsbury —p 119

West Virginia Medical Journal, Huntington

May XII No 11

152 Causes and Treatment of Arteriosclerosis C O Grady, Charleston —p 398

Wisconsin Medical Journal, Milwaukee

May XV, No 12

153 Results of Treatment in Hodgkin's Disease J L Yates, Milwaukee, and C H Bunting, Madison —p 453
154 Pott's Disease Diagnosis and Treatment by Bone Transplant Method F J Gaenslen, Milwaukee —p 463
155 Echinococcus Infections Report of Cases S Cahana, Milwaukee —p 468
156 Acute Perforating Ulcer of Stomach and Duodenum J P Connell and P J Colvy, Fond du Lac —p 470
157 Treatment of Wounds and Infections G E Seaman, Milwaukee —p 472

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

May 12, I No 2941

1 Restricted Supply of Food *Its Relation to Health and Efficiency* M S Pembrey —p 605
2 Three Common Intestinal Entamebae of Man and Their *Differential* Diagnosis C Dobell and M W Jepps —p 607
3 Postoperative Tympanites Its Nature and Some Points in Treatment J D Malcolm —p 612
4 Two Cases of Pregnancy Complicated by Myoma Uteri J B Hellier —p 614
5 Technic of Cesarean Section E F Neve —p 615
6 Gonorrhea Treated by Electrolysis, New Electrolyte C Russ —p 616
7 Therapeutic Effects of Colloidal Preparations M Morris —p 617

Journal of Tropical Medicine and Hygiene, London

May 1 XX, No 9

8 Case of Urinary Amebiasis in Anglo Egyptian Sudan A J Chalmers and W R O'Farrell —p 97

Lancet, London

May 12, I No 4889

9 Gunshot Wounds of Joints, Their Pathology and Treatment I Cook —p 711
10 Direct Transfusion of Blood A Fullerton, G Dreyer and H C Bazett —p 715
11 Fragment of Shell Embedded in Internal Popliteal Nerve J M Davidson and P Lockhart Mummery —p 719
12 Oculopalpebral Prothesis A M Ramsay —p 721
13 Surgical Correction without Cicatrix, of Unlovely Noses J Bourguet —p 722
14 Easily Improvised and Effective Method of Obtaining Plate Cultures of Anaerobes W J Wilson —p 724
15 New Bone Clip for Treatment of Fractures of Long Bones J E Adams —p 725
16 Question of Economy in Food M S Pembrey —p 732

Medical Journal of Australia, Sydney

April 14, I No 15

17 Work of Casualty Clearing Station A L McLean —p 309
18 Importance of Early Diagnosis in Pulmonary Tuberculosis from Public Health Point of View A Stewart —p 312

April 21 No 16

19 Limitations of Antiseptic Method Especially in Relation to Burns and Scalds A C I Halford—p [illegible]
20 Cerebrospinal Fever 1916 C A Stewart—p 333

April 28 No 17

21 War Surgery at Front C MacLaurin—p 351
22 Cesarean Section in Infective Cases and Value of Adequate Drainage W A Verco—p 353
23 Case of Poisoning by Hydrocyanic Acid Gas A M McIntosh—p 355

Lyon Chirurgical

January-February XII No 1 pp 1-[illegible]

24 Early Secondary Suture of War Wounds L. Tavernier—p 1 B Desplas and A Policard—p 1[illegible]
25 Primary Suture of War Wounds A Chalier—p 35
26 Latent Microbian Infection of Wounds After Healing (Tolerance du tissu de bourgeonnement des plaies de guerre en voie de cicatrisation pour des corps etrangers de dimensions microscopiques.) A Policard and B Desplas.—p 4[illegible]
27 Treatment of Shock in the Severely Wounded P Santy—p 54
28 Restoration of Penis After War Wounds Four Cases Rochet and Richer—p 63
29 Arthrotomy with Immediate Suture for Certain War Wounds of the Knee H Gaudier and R Montaz.—p 77
30 Wounds of the Knee Thirty-Three New Cases. J Bosquette and P Moulonguet.—p 100 Fifty-Two Cases W H Ogilvie p 134 With Fracture of the Patella Eleven Cases A Combier and J Murard—p 156 Keeping Wounded Knee at Right Angle Facilitates Drainage J Ducuing—p 17[illegible]
31 Prophylaxis and Treatment of Chronic Osteitis and Fistulas L. Desgouttes.—p 202

24 Early Secondary Suture of Wounds—Tavernier remarks that Carrel's publications on the treatment of war wounds have focused attention on Dakin's neutral solution of chlorinated soda more than on the early suturing while the latter is in reality the essential element of his method. It used to be restricted to exceptional cases and Carrel's innovation is its general use. Tavernier soon became convinced that when the wound was once thoroughly cleared out it made little if any difference whether it was irrigated or not and hence he suppresses the continuous irrigation entirely as a rule. It keeps the bed wet and requires constant surveillance and frequent dressings. All this is avoided by surgical cleansing of the wound cutting away all bruised tissues and making an opening for drainage at the lowest point. All splints of bone are removed unless solidly adherent; pseudarthrosis is rare after subperiosteal removal of sequesters. If important nerves have been severed they are sutured at once. In this case he refrains from iodin but otherwise swabs out the wound lightly with it. After a day without fever the dressing is removed and, if the aspect of the wound is satisfactory it is sutured. The stitches may even be taken at the first intervention, they are ready then to be drawn up and tied. He regards the outcome in his seventy-nine cases as very satisfactory. There was only one case in which a severe infectious focus developed after the suture.

25 Primary Suture of War Wounds—Chalier has discarded antiseptics etc and now relies on operating so early that infection has not had time to develop clearing out the focus so thoroughly that there are no appreciable sources of infection left. Under this mechanical-surgical asepsis he sutures at once in several tiers. The wound not only heals promptly but the healing is ideal. Constant supervision is necessary however ready to open up the wound again if symptoms develop.

26 Repair of War Wounds—Policard and Desplas reiterate that the primary surgical clearing out of the wound is the main thing then watching for the earliest moment when it is safe to suture. This waiting period is shorter the more thoroughly the wound has been cleaned out. They call attention to microscopic foreign bodies that may be left in wounds healing apparently aseptically. These explain the sudden relapses of infection later sometimes observed and they teach the necessity for more thorough primary clearing out of the depths of the wound.

27 Treatment of Shock from War Wounds—Santy has found initial shock rare, the shock after hemorrhage is induced by the cold, the carrying and the pain. He treats it by placing the man stripped on an operating table, the head low to combat the anemia of the medulla oblongata, and then applies a tent with heated air entering at the foot to warm him thoroughly. The blood pressure is raised by intravenous injection of 500 c c of saline at 104 F containing 0.25 mg epinephrin. This intravenous injection is repeated every six hours during the first twenty-four in case of severe shock but the other doses should be only 250 c c. The recuperation is remarkably prompt and complete when these simple measures can be applied early before the actual posthemorrhagic shock. The shock thus conquered at once permits prompt operation on the wounds. The advanced posts should be equipped for combating shock and operating for all the more serious wounds.

30 Wounds of the Knee—Ducuing gives illustrations showing the better facilities for draining after resection of the knee when it is kept flexed at a right angle. This keeps the space back of the femur effectually drained.

Presse Medicale, Paris

April 19 XXV No 23 pp 233-240

32 Writing That Can Be Read by Blind and Seeing (Typhlographie en caracteres usuels) A Cantonnet—Title page
33 Wounds of Pleura and Lung V Pauchet—p 233
34 Vaccine Treatment in Certain Cases of Chronic Enteritis A Berthelot—p 235

32 Writing for the Blind and the Seeing—Cantonnet's ruler with slits is illustrated. The method of using it was described in The Journal, May 19, p 1511.

Progrès Medical, Paris

April 28 XXXII No 17 pp 139-146

35 Treatment of War Deafness J Baratoux—p 139
36 Latent Aneurysms in the Wounded Revealed by Radioscopy H Pelon—p 143
37 Agricultural Colleges for Girls A Satre—p 144

35 War Deafness.—A number of devices are illustrated that have proved their usefulness in reeducating the hearing apparatus after deafness from concussions etc. The chief of the service relates that when the hearing has been entirely lost the men learn lip reading so readily that in three months they are as expert at it as the congenitally deaf after eight years of training.

37 Agricultural College for Girls and Women.—Satre describes the successful schools for girls in Russia where they are said to be trained in everything that the wife and daughter of a farmer should know to aid in carrying on the farm. The courses are one or two years long in some, but the Tchernigov school is a training school for well-to-do farmers' daughters. They are admitted at the age of 13 and get their diploma at 17. In France there are schools for dairy work and bee culture, but none as yet that prepare for all the duties of a farmer's wife.

Revue de Chirurgie, Paris

Sept-Oct 1916 (Published March 1917) XXXV No 9-10 pp 245-493

38 *War Wounds of Foot and Ankle E Quenu—p 245 To be continued
39 Treatment of Wounds and Fractures of Joints One Hundred Cases J Catellier—p 323 To be continued
40 *Primary Suture of Fractured Long Bones (De l'ostéosynthese primitive dans les fractures diaphysaires par projectiles de guerre) P Bonnet—p 346
41 *Present Status of Treatment of War Wounds. E. Marquis—p 384
42 *Malaria and Traumatism in the Wounded in the Near East L Moreau—p 404
43 *Postoperative Jaundice Terminating Fatally (L'hepato-nephrite chloroformique sans azotemie) N Fiessinger and F Montaz p 424
44 War Wounds of Blood Vessels Without Hemorrhage (Les plaies vasculaires seches) J Fiolle—p 444
45 Extraction of Projectiles Under Intermittent Screen Control K Toupet—p 462

38 Wounds of the Foot and Ankle—Quenu's study is based on 300 cases personally observed. This instalment of his report fills nearly a hundred pages and is accompanied by 141 illustrations.

40 Consolidation by Primary Intention with War Fractures of Long Bones—Bonnet relates that when it was possible to operate in the first hours after the injury, he was able to insure healing by primary intention in the seven cases reported He systematically cleared out all the sequesters and sutured the fracture, and the coaptation thus realized resulted in prompt repair The humerus, forearm and femur were the bones involved

41 **Present Status of Treatment of War Wounds**—Marquis as consulting surgeon has had opportunity to compare the results of the different methods of managing wounds now in vogue They all teach, he emphasizes, the necessity for extremely early surgical intervention and the usefulness of primary resections within certain limits Also that primary suture should not be attempted unless the surgeon is certain of his asepsis and when the patient can be kept till cured Otherwise not Thirdly he emphasizes the fine results of what he calls the primo-secondary suture, done from the sixth to the fifteenth day To realize this, we can use the Carrel method but, when this is impracticable, a 12 1 per cent solution of magnesium chlorid can be used for rinsing and dressing the wound His final conclusion is that during a battle, when the wounded are arriving in large numbers, none of the above measures can be applied The choice of treatment then is between a 14 per cent solution of sea salt and Menciere's balsam method These have proved their usefulness for recent wounds (The latter was described in these columns, April 28, 1917, p 1294)

42 **Malaria in the Troops in the Near East**—Moreau states that nearly all the wounded that have returned to France from the campaigns in Macedonia, Serbia and the Dardanelles have had attacks of malaria since their return Their wound reduced their resisting powers so that the malaria flared up again in those who had had it once, and it broke out for the first time in those who had been inoculated with the virus but their resisting powers had kept it latent

43 **Injury of the Liver from Chloroform**—Fiessinger and Montaz call attention to the toxic action of chloroform on the liver, which, they declare, is becoming more and more apparent In a case described, with the necropsy findings, a previously healthy young man developed intense jaundice and albuminuria, and collapsed in three days after a third operation under chloroform A total of 40 gm of chloroform had been used in all There was no uremia or hemorrhage, but necropsy revealed a pseudo-nutmeg liver, injury of the suprarenals and massive degenerative nephritis of the convoluted tubules The findings indicated that the liver was* first affected, and that toxic action from this injured the kidneys This case and analogous experiences that have been reported by others teach that chloroform should never be used when the liver is known to be below par

Correspondenz-Blatt fur Schweizer Aerzte, Basel

April 28, XLVII, No 17, pp 513 544

46 *Therapeutic Iontophoresis H Koller—p 513 Commenced in No 16, p 485
47 Inhalation of Dust in Metal Grinding (Zur Pneumonokoniose der Metallschleifer) H Wegmann—p 526

46 **Iontophoresis of Heavy Metals**—Koller explains that the technic and application of medical ionization have been worked out almost exclusively by ophthalmologists since the publications of Leduc and Frankenhauser 1900-1907 He describes extensive experiments he has been making with the ions of the heavy metals, passing them through dead animal membranes and in experiments on rabbits' ears, and refers to a recent work in this line by E Sturridge in a dental journal The results of Koller's research warn against the use of zinc and copper salts on a large surface as, for example, in the vagina, but silver, he asserts, is peculiarly adapted for IPH The chlorids which silver forms in the body are insoluble and hence not toxic The evidence presented seems to show that heavy metals in ion form can penetrate into and pass along in the body, but they are kept from doing harm by an antibody, an actual anti-ion colloid At the moment of the discharge (*Entladung*), however, the ion becomes active and by forming salts induces precipitation of the colloid, that is, it exerts a caustic action The process is not restricted to the electrode but occurs throughout the body wherever the metal ions happen to be at the time The ideal therapeutic condition would be if this precipitation could occur only with the especially susceptible bacterial albumins, thus leaving the therapeutic action without injurious by-effects on the organism When there is a general precipitation of colloid, in the course of mercury or silver treatment, then we have the dread symptoms of general intoxication If we can master the conditions regulating the migration and discharges of the heavy metals in the body, promising vistas open for therapeutics

Gazzetta degli Ospedali e delle Cliniche, Milan

March 18 XXVIII No 22, pp 337 352

48 Abscess in Frontal Lobe from Overlooked Scrap of Shell Recovery G Aperlo—p 337

March 25 No 24, pp 369 383

49 *Suture of Diaphragm After War Wound O Ortali—p 369

49 **Suture of the Diaphragm.**—Ortali expatiates on the difficulty of diagnosing a wound of the diaphragm on account of the disturbances from injury of organs near by and from viscera forming hernia through the gap as in a case reported The slit in the diaphragm in his case was 4 inches long, but the bullet had not injured any organ in its passage through the seventh left interspace He resected a rib, thus obtaining access to the diaphragm, and easily reduced the omentum and colon, and sutured the diaphragm, with prompt recovery

Policlinico, Rome

April 29 XXIV, No 18, pp 569 608

50 *Present Status and Importance of Roentgen Examinations in Military Surgery P Masserini—p 569, (Profondimetro Luisada Toccafondi) E Luisada—p 588, (Brevi considerazioni sulla ricerca radioscopica dei proiettili) F Leocata—p 590, (Dopo un anno di lavoro) *E Grego—p 592*
51 Modification of the Excursions of the Diaphragm After Perforation by Bullet G Ceresole—p 580
52 Roentgen Localization of Needle Entering at Buttocks F Ghilarducci—p 584
53 Technic for Roentgen Stereoscopy G C Trabacchi—p 586

50 **Medical Radiology**—This entire number of the *Policlinico* is devoted to experiences with Roentgen examination for various purposes, mostly on the firing line A number of special technical points are described and the difficulties under certain conditions are emphasized Grego presents what he calls the technical balance sheet, the scientific, the economic and the moral balance sheets from his year's work with a Roentgen ambulance He insists that radiography, not radioscopy, should be the reliance, and expatiates on the advantages of its more general use close to the firing line

Riforma Medica, Naples

April 14 XXXIII, No 15, pp 393-420

54 Antituberculosis Dispensaries A Pirera—p 393
55 *Influence of Various Chemicals on Transplanted Tumors in Hens F Pentimalli—p 396
56 Intravenous Injection of Colloidal Gold in Typhoid R Massalongo and S Vivaldi—p 397 To be continued
57 Hard Edema in the Joints from Long Continued Industrial Injury (Della cellulo dermite auto contusiva degli arti) A Mori p 402 Commenced in No 14, p 371
58 Present Status of Mitral Infantilism L Ferrannini—p 410

55 **Action of Chemicals on Sarcoma in Fowls**—Pentimalli added various chemicals to the suspension of the sarcoma tissue before inoculating the fowls The tumors failed to grow when chloroform-toluol, hydrochloric acid, potassa, acetone, mercuric chlorid, formaldehyd or iodin had been added to the suspension in a minute amount But the tumors developed as usual when toluol alone, a lipoid extract of the pyocyaneus, neosalvarsan, crystal violet or various salts of sodium with tartaric acid were used Antimony and potassium tartrate seems to be the only one of the chemicals used which prevented the development of the tumor in a dose such as the fowl could bear This drug is being used extensively in treatment of leishmaniosis, and the experiments related here suggest that further research in this line might give interesting results With a proportion of 1 300 and 1 500, no tumors developed, but at 1 700 and 1 900 the inoculation with the tumor suspension gave positive results

Cronica Medica, Lima, Peru

April XXXIV No 646 pp 117-145

59 *Vaccine Therapy of Typhoid Fever L. H Mejia—p 120
60 Hemiplegia Following Typhus E Odriozola—p 131
61 Double Lateral Colporrhaphy for Cystocele C T Carvallo p 135
62 Birth of Healthy Child at Term After Entire Cervix Had Sloughed Off in Previous Pregnancy H Larrabure—p 136

59 **Vaccine Therapy of Typhoid**—Mejia summarizes the experiences in this line of numerous clinicians as published in various countries and reports excellent results in twenty-four cases personally observed with recovery of all the patients. He used a vaccine sterilized by heat and states that when there was a local or systemic reaction it was transient. The second or third day there was no further trace of by-effects while the general condition showed marked improvement.

60. **Hemiplegia Consecutive to Typhus**—Odriozola's patient was a man of 27 who had had typhus between two and three years before. It had left him with left hemiplegia complete, even including the face, but it has improved somewhat in the course of the years. Odriozola remarks that typhus is endemic in parts of Peru and refers to the extra malignancy of a recent epidemic of it at Cerro de Pasco in which numerous employees of the Compania Americana succumbed. Typhus does not exist at Lima and cases brought there from the mountains usually lose their virulence and contagiousness. But this was not the case with the typhus patients from Cerro de Pasco; the disease ran an exceptionally severe course in them. The men were nearly all addicted to alcohol which possibly cooperated in the gravity of the disease.

61 **Double Lateral Colporrhaphy for Cystocele**—Carvallo does not approve of the usual single median incision as this sacrifices the anatomic rhaphe of the vagina while the bladder and the mucosa of the vagina at this point are so close together that it is difficult to avoid injuring the bladder during the incision. Repair afterward is liable to mishaps, for reasons which he enumerates. These disadvantages are all avoided by making two incisions, one on each side, respecting the median portion. After the operation there is support from the normal rhaphe and also from the strips of cicatricial tissue on each side. Fehling proposed this some years ago, Carvallo says, but he has found no reference to it since.

Prensa Medica Argentina, Buenos Aires

April 10 III No 31 pp 329-339

63 Appendicitis from Maggots in the Intestine. (Miasis intestinal producida por larvas de la 'Compsomyia macellaria.') S E. Parodi and A Saccone—p 329
64 *Mental Disturbance with Heart Disease M R Castex and J C Vivaldo—p 331 Commenced in No 30 p 317
65 *Treatment of American Leishmaniosis of the Skin A Neiva and B Barbara—p 334
66 Painful Protracted Priapism J A. Esteves and R. Chiappori p 336 To be continued
67 The Oculocardiac Reflex S B Amadeo—p 337 Commenced in No 29

64 **Mental Disturbances with Heart Disease**—Castex and Vivaldo remark that the connection between heart disease and mental derangement is often overlooked. The specialists in heart disease pay little heed to the psychic sphere in the cases in which the psychic symptoms are mild and fleeting, and on the other hand when the mental disturbances predominate the psychiatrists ascribe slight importance to clinical study of the causal heart trouble. They report thirteen cases, grouping them as the endocarditis was of the acute recurring type or there was chronic valvular disease or asystole. The mental disturbances were most common with acute recurring endocarditis. They were undoubtedly the work of toxins on the brain. There was concomitant kidney trouble in nearly all and the mental confusion, hallucinations, etc. were of the same type as in other general infections in which the heart is spared, but they are never so severe as in the endocarditis cases. The defective functioning of the pathologic heart is the principal predisposing cause for the toxic psychoses. In the three endocarditis cases necropsy showed no appreciable lesions in the brain. The mental confusion and delirium were of the infectious toxic character, alternating in one with periods of hypochondriac depression and euphoria.

In three patients with aortic and one with mitral valvular disease melancholia predominated in those of syphilitic origin and motor excitement in the others. The importance of conditions in the circulation as the main factor in the mental disturbances here is confirmed by the aggravation as the terminal phase approached. The brain already suffering from syphilis develops mental confusion, depression and hallucinations with motor excitement, under the influence of the inadequate circulation. In two of the cases the mental as well as the physical condition improved under treatment, the attacks of depression or excitement subsiding. In five cases of asystole two men improved under treatment so that they left the hospital in good condition. One had presented on entering melancholia, constant delirium and paroxysms of motor excitement but no hallucinations. The other, a syphilitic, had vague hallucinations, vague delirious ideas, slight mental confusion and extreme depression. Both were men of 59. The international literature on the subject is reviewed and the data compared in detail with the types here presented.

65 **Tartar Emetic in Treatment of Superficial Leishmaniosis.**—Neiva and Barbara give an illustrated description of three cases in which systematic treatment with tartrate of potassium and antimony arrested the leishmaniosis of from nearly two to eight years' standing. They relate that when Vianna introduced this treatment in 1912 he used a 1 per thousand solution in 0.85 per cent saline. Later he modified the dosage, obtaining the best results with a 1 per cent solution in the same saline. The solution once prepared cannot be sterilized by heat as otherwise it loses its therapeutic properties. It is sterilized merely by passing it through a Chamberland F or Berkefeld V filter. The patients bear it perfectly; caution seems to be required only with chronic kidney disease. The first dose is 5 c.c. of the 1 per cent solution, the following ones 10 c.c., if the first is borne well, all intravenous. When well borne they can be given daily. Some patients have taken over 100 injections.

67 **The Oculocardiac Reflex**—Amadeo gives the tracings from experimental research on the oculocardiac reflex, especially on anesthetized dogs. He also tabulates the results in 80 sick and well persons, including 50 whose pulse tracings were taken. The findings show that the oculocardiac reflex may vary not only from day to day but even from moment to moment in the same subject. It is impossible to be sure that the pressure applied is identical each time, which may influence the results. Of 12 tabetics tested, the reflex was normal in only 2, inverted in one and abolished in the others. In 3 patients with sclerosis in patches, the reflex was normal as also in 6 of 16 pregnant women; it was abolished in 8 and inverted in 2. The reflex thus does not seem to have any decisive differential value.

Russkiy Vrach, Petrograd

XVI No 5, pp 97-120

68 Pirogoff's Letters from Berlin, 1833-1835 S Y Shtraikh—p 97
69 Present Status of Legislation on Public Health Matters in Russia V I Razumovsky—p 102
70 *Pathogenesis of Addison's Disease A I Yushtchenko—p 105
71 Etiology of Gas Phlegmon A E and V E Burovikh—p 108 Commenced in No 4 p 84
72 Action of Digitalis Ambigua on Isolated Heart and Blood Pressure V M Sokoloff—p 114

70 **Pathogenesis of Addison's Disease**—Yushtchenko relates that he has encountered a number of cases in soldiers which would have been classed with the traumatic neuroses if it were not for the fact that the men presented certain symptoms which we are accustomed to encounter with Addison's disease, especially the pronounced bronzing. Analysis of the cases shows further a deficiency in the functioning of both parts of the suprarenals, but there are no manifestations of tuberculosis, no status lymphaticus, etc. The course of the affection also is comparatively light and several of the men have materially improved, while the trend in all

is upward He kept the men on a vegetable or vegetable-milk diet, and gave subcutaneous injections of arsenic, with tepid baths and repose

He thinks that these cases throw light on the pathogenesis of ordinary Addison's disease Infection and phenomena connected with immunity may be predisposing causes, but physical and psychic trauma are the direct factors

There is nothing surprising in assuming a psychic origin for hyposuprarenalism as we know the enormous influence of the mind on the functioning of the glands with either an internal or an external secretion "It is especially liable with the suprarenals," he says, "on account of the developmental relations between them and the nervous system—the suprarenals being provided with nerves as no other organ in the body" His experimental and clinical experiences have convinced him that the task of the glands with an internal secretion is not the neutralizing of toxins, nor merely the whipping up or the holding back of the functioning of other organs The task of the glands with an internal secretion is the regulation of the interchanges of the different elements of the organism, such as the albumin, the nucleoproteids, lipoids, etc In short, their task is much like that of the glands with an external secretion, only that it is more diversified and more complex He cites a number of metabolic experiments to sustain this assumption, among them the increased cholin and phosphoric acid content of the urine in some of the patients here described

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

April 7, I, No 14, pp 1077 1172

73 Treatment of Sinus Thrombosis Complicating Suppurating Otitis Media I C Henkes —p 1092
74 Morbidity of the Personnel of Holland Railroad J E C School p 1103
75 *The Question of Traumatic Neuroses as Illuminated by Experiences in the War T Kuiper —p 1106

75 **Traumatic Neuroses**—Kuiper describes the conflicting views and mode of treatment in respect to traumatic neuroses, especially in the soldiers of the different warring forces Three conceptions prevail, that of the "organic" nature of the disturbances (Oppenheim), the "functional" nature (Charcot) and the "intellectual" nature (von Strümpell) Oppenheim describes the manifestations of *Erschutterung* or concussion of the nervous system as liable to include seven different types, pain in the region affected and efforts to keep the part still to prevent its hurting worse, 2, irritability, and other manifestations of changes in the psychic sphere, 3, headache and dizziness, 4, reflex epilepsy, 5, local muscular spasms, 6, manifestations suggesting neurasthenia, and 7, manifestations suggesting hysteria Kuiper reviews and compares all the arguments for and against each of these conceptions, and the results of treatment based on each He has been convinced by the experiences related that Oppenheim is right in assuming the continuity of the nervous system as a whole, so that the entire system, brain and all, suffers when part of it is violently jarred The next step from accepting this assumption of molecular alterations, transmitted from periphery to brain is to accept von Monakow's diaschisis theory, and then to assume that the diaschisis may make its influence felt on the glands with an internal secretion through the mediation of the nerves innervating them, as also on the muscles, through tonic, vasomotor, trophic and other influences from the sympathetic and autonomous nervous systems

Svenska Lakaresallskapets Handlingar, Stockholm

March 31, XLIII, No 1, pp 1 344

76 Balance, Position and Automatic Movements at Rest and During Exercise Physiologic and Unphysiologic Gymnastic Exercises T Resmark —p 1
77 Intravenous Injection of Drug or Serum Below Tourniquet in Treatment of Localized Infectious Process G Nyström —p 185

Ugeskrift for Læger, Copenhagen

April 12, LXXIX, No 15, pp 559 604

78 *Successful Removal of Pituitary Tumor P N Hansen —p 559
79 Antithyroidin in Therapeutics A Rahlff —p 566
80 *The Adequate Protein Minimum in Dietaries (Ernæringsspørgsmaalet.) M Hindhede —p 571 Commenced in No 13, p 491

78 **Pituitary Tumor**—The first symptoms were those of atrophy of the optic nerve, beginning eight years ago The right eye became totally blind by the end of the fifth year and the left visual field became contracted although the eye seemed otherwise sound except that the papilla was blanched A pituitary tumor was surmised, and the patient kept under close observation, but there was no change for nearly three years The man of 48 complained occasionally of headache It lasted for an hour or two and was very severe There was nothing to suggest venereal disease or abuse of alcohol, but roentgenoscopy showed the sella turcica twice the normal size The tumor was removed by turning back the nose it was a small-celled sarcoma Recovery was soon complete and the man now feels quite well The findings as to vision and hearing have not changed but there is no further headache or dizziness As is always the case, the whole of the tumor could not be removed and yet all disturbances ceased There was transient polyuria for a time after the operation

80 **Low Basal Protein Requirement in Health**—Hindhede was requested by the editors of the *Ugeskrift* to give an oversight of the work that has been done in recent years toward the solution of the problems of nutrition and minimum dietary needs After an extensive review of the subject he describes his own research, saying that scientists until recently have mistaken the vitamin requirement for the albumin requirement The standard for the minimum basal protein need was thus founded on mistaken premises By a fortunate chance, his own research from the first was based on foods particularly rich in vitamins His life for twenty-one years has been practically one continuous laboratory experiment in this respect, he and his family living on an average of 50 gm of digestible protein per capita as the extreme The nitrogen output in his urine has kept close to 7 gm The diet was not vegetarian, but merely was restricted to from 30 to 50 gm digestible albumin His children after ten years of this diet measured and weighed up to others two years older, their endurance was almost proverbial He began by living for three months on potatoes, butter, strawberries and milk, a total of 30 gm of digestible albumin In order to determine the minimum need he undertook long series of experiments on himself and two men, his laboratory assistant and a student These tests were continued for six months at a time The details are tabulated and compared with similar experiments by Rubner and others

Among the conclusions from the data tabulated are that the minimum of albumin for 3,000 calories is about 20 gm of digestible albumin Also that the albumin in potatoes, bread milk and meat has essentially the same biologic value Also that the actual need of the body for albumin yields to the urine only 3 or 4 gm nitrogen a day The high figures for the output of nitrogen obtained in the Chittenden, Rubner and other tests, based on the old supposed albumin requirement reached such high figures because the excess of albumin not needed by the body was thrown off "This shows," he claims, how expensive this false theory has been to the world" He declares in conclusion that there is no need to pay attention to the albumin in the diet, this will take care of itself But there is every need to pay attention to the articles of diet which we know cure beriberi and scurvy bran, potatoes, carrots, pot herbs, soup, raw fruit and raw milk A moderate amount of meat may do no harm, but he insists that his years of home and laboratory experiments and tests have amply confirmed the fact that meat is unnecessary His last word is that he cannot falsify the figures resulting from his years of research even though he knows that he may be called a fanatic "If any one had told me twenty years ago, or even six years ago, that one could live year after year in the best of well-being on potatoes, margarin and water, I would scarcely have believed him I would have regarded 40 to 50 gm of albumin as the minimum instead of the 20 gm which tests on three adults proved to be the minimum One of the men had considerable exercise one a moderate amount, and one did almost exclusively brain work"

[Middle instalment of Hindhede article lost in the mails]

The Journal of the
American Medical Association

Published Under the Auspices of the Board of Trustees

Vol LXVIII, No 25 Chicago, Illinois June 23, 1917

THE CARE OF CRIPPLES AS A PROBLEM FOR EACH INDIVIDUAL STATE*

EDWIN W RYERSON, MD

Professor of Orthopedic Surgery Chicago Polyclinic Assistant Professor of Surgery Rush Medical College Orthopedic Surgeon to Children's Memorial Hospital and the Home for Destitute Crippled Children

CHICAGO

In every state of the Union there is a large number of crippled persons who are not receiving proper attention Many of them have no medical or surgical treatment whatever and most of them have little opportunity to acquire a good education Entirely aside from their own mental and physical sufferings, they constitute an enormous economic disadvantage and loss to their families and communities and to the state It has been clearly demonstrated that most of these persons, by proper treatment, may be restored to a condition of usefulness, and that many of them, by proper education, may become able to earn a fair income

Why is it, then, that only four of our states have established institutions in which cripples may be treated and educated? Is it because the legislators are unwilling to adopt so good a business proposition and so broad a charity? Or is it because the subject has not been presented with sufficient force and energy? The latter is probably the true reason

It requires a great deal of hard work to persuade a state legislature to devote any of the state revenue to a new project, and the moving spirits in the enterprise must be prepared for a hard struggle Minnesota, New York, Massachusetts and Nebraska have already established institutions for the care of cripples, and the other states must be induced to follow suit

Allison, in his chairman's address before this section in 1915, states that in the United States there existed at that time ten hospitals, fourteen convalescent hospitals and thirteen asylum homes exclusively for cripples This number has not been materially increased in the past two years Approximately 2,000 patients can be accommodated in these institutions These 2,000 represent a very small proportion of the cripples in the United States No accurate figures exist to show the total number in this country, but on the basis of the English and German reports by Beyers and Lange, we must have at least half a million and probably more, the accepted proportion being from 3,000 to 3,500 cripples to the million inhabitants Allison estimates that about 133,000 of these are under 14 years of age In considering such figures, it must be remembered that not all of these cripples are in need of state or municipal care Some of them are well treated and well educated at the expense of their own families, but it is safe to say that they form a considerable minority Two thousand of the remainder are treated at the four state institutions mentioned above and the thirty-three institutions maintained by private charity a few hundred more are cared for in the wards of general hospitals, and the rest of them are practically neglected so far as education and skilled treatment are concerned

We must, therefore, put our shoulders to the wheel and endeavor to construct a plan which will be comprehensive and practical, and which will appeal to the legislators of the various states This plan should be worked out on a nonpolitical basis The medical and the educational staffs should not be subject to removal for purely political reasons

We should, it seems to me, advocate, in all states where it is possible, an orthopedic institution established and maintained by the state, and under the direction and management of the state university, the university furnishing the medical and surgical staff from its own medical school, and the educational staff from its other departments This orthopedic institution should be one of the units of a state general hospital, which should be operated on the plan of the Michigan State Hospital at Ann Arbor, to which any resident of the state who is unable to pay for a private physician may go or be sent at the expense of the state

Such an orthopedic institution should consist of a number of different departments First, a hospital building of sufficient size, in which operative and mechanical treatment can be carried out for those who need it Second, a convalescent department, for those less acutely affected, with separate provision for the case of tuberculous bone and joint disease Third, a permanent home for those cripples who have no home

It must be remembered that many of the patients in such an institution will have to remain there for years, that the larger proportion of them will be children, and that they must be educated as well as healed It is in this respect that many institutions are deficient The vast majority of cripples in this country can be made into useful citizens if they can be properly taught such forms of work as they are capable of performing Their lives will be infinitely happier and more valuable if they can be trained in the useful arts and industries, and in place of being useless drags on the community, they will become actual producers and providers

---

* Chairman's address read before the Section on Orthopedic Surgery at the Sixty Eighth Annual Session of the American Medical Association, New York June 1917

An institution of the kind here outlined should be open to people of all ages Many of our existing hospitals and homes for cripples accept only children, and when the little patients reach the age of 12 or 14 they are turned out into the world to shift for themselves, whether they are cured or not We must make it very plain to our legislators that it takes many years to cure some of the cases of tuberculous joint disease, for example, and that there are many adults who need just as skilful and prolonged treatment as do the children If we are to attempt some radical and constructive work in our various states, let us make it as comprehensive and as broad as possible

The educational lines of the institution can hardly be discussed by a mere surgeon, but it would appear practical to teach the cripples useful trades, such as light manufacturing, shoemaking and cobbling, brush and basket making, sewing, millinery, dressmaking and embroidery, and to find a market for the results of the labor Some of the patients will undoubtedly be found mentally equipped for higher education, and this could readily be provided

It is probable that the great international conflict into which we are now plunged will rightly and properly overshadow any great progress in the directions that I have indicated, but we must, after all, build for the future, and we who spend our lives among these unfortunates should be the ones to turn the spotlight of publicity on their helplessness and their crying needs

122 South Michigan Avenue.

THREE YEARS' EXPERIENCE IN THE SEARCH FOR TYPHOID CARRIERS IN MINNESOTA *

A. J CHESLEY, M D
Director, Division of Preventable Diseases, Minnesota State Board of Health
H A. BURNS, M D
Epidemiologist
W P GREENE, M D
Epidemiologist
AND
E M WADE, M A.
Chief, Main Laboratory
MINNEAPOLIS

It is the policy of the Division of Preventable Diseases of the Minnesota State Board of Health to determine if possible the source of infection in all sporadic cases of typhoid fever as well as in outbreaks of considerable magnitude The search for carriers as prosecuted by this division during the past three years has been so satisfactory that a review of the methods used, together with brief histories of the cases, is here presented

On receipt of a report of a case or suspected case of typhoid fever, or on the finding of a positive Widal reaction in a specimen of blood sent to the laboratory, a blank, requesting certain epidemiologic data, is sent to the attending physician This blank, when properly filled in, gives the following environmental data residence and occupation, milk and water supply of patient during the three weeks prior to onset of disease, exposure to known cases of typhoid fever, and the synchronous development of typhoid fever in the patient's associates Data which seem of no importance by themselves may be of significance and use when reviewed along with other data possessed by the division Often widely separated cases are traced to a common source through the study of epidemiologic case reports and other data on file in the office of the division but not available elsewhere If, after study of the data thus furnished and all other available data, the case appears to have been caused through some other route of infection than that of contact with another recognized case, it is further investigated The epidemiologist visits the patient, together with the attending physician and health officer, if possible

When the epidemiologic evidence points to the infection being of carrier origin, the following procedure is followed Blood specimens for the Widal test are taken from those persons suspected of being responsible for the infection or from a group suspected of containing a carrier Special attention is given to those who give a positive or possible history of typhoid fever If the Widal reaction is found to be present or atypical in any of the suspected persons, specimens of the feces and urine are examined bacteriologically If the epidemiologic information obtained points specifically to one or more persons in whom the Widal reaction is absent, the discharges from such suspects are likewise examined Organisms isolated from the discharges are diagnosed *B typhosus* or *B paratyphosus* only after being found to conform to the recognized action of these organisms on the regularly used differential culture mediums, and to be agglutinated by typhoid or paratyphoid serum

Under the regulations of the state board of health, a typhoid carrier is not permitted "to handle in any capacity milk, cream, butter, other food or food products liable to be eaten without being cooked, if such foods are to be offered for sale" This regulation is enforced, and if the carrier lives in an unsewered district, the use of a fly-proof sanitary privy is compulsory The contents of the privy vault must be disinfected with lime or other disinfectant at stated intervals under the direction of the local health officer Frequent thorough scrubbing of the interior of the privy is also insisted on The carrier is instructed to cleanse the hands thoroughly after defecation and micturition and before handling table dishes, food, etc, to be used by others, and also to disinfect his personal bed and body linen Any change in occupation or residence of a carrier must be reported to the local health officer and by him to the state board of health Other members of a carrier's family are protected by typhoid vaccine, and they, too, are instructed as to the value of cleanly habits on their part All information concerning a carrier is treated as confidential unless it becomes necessary to use publicity to enforce instructions Whenever an epidemiologist is in the vicinity of a carrier, if possible, he visits him to see if instructions are being followed

During the three years ending Dec 31, 1916, sixty-nine carriers of *B typhosus* or *B paratyphosus* have been identified by the laboratory, and these cases fall readily into two groups Group 1 contains thirty persons, twenty-five inmates of three state institutions, two for the insane and one for the feebleminded, and five patients in tuberculosis sanatoriums Group 2 contains thirty-nine persons found in the routine investigations to determine the sources of typhoid outbreaks

---

* From the Division of Preventable Diseases, State Board of Health

* Because of lack of space, this article is abbreviated by the omission of reports of a number of cases The article will appear in full in the reprints, a copy of which may be obtained from the authors on request

Group 1 In a study[1] of the effects of typhoid immunization in relation to the Widal reaction, twenty-four persons in this group were found to have the Widal reaction present prior to administration of the vaccine Previous history of typhoid fever in these carriers could not be learned because of the mental condition of the patients, all being either insane or feebleminded All had been residents of their respective institutions for a long time In these two institutions typhoid fever had been endemic The epidemiologic evidence showed the endemic typhoid to be beyond doubt of carrier origin, but because of the nature of the patients and the community life, the exact number of cases traceable to each individual carrier could not be determined Among these persons there was found to be a large number of carriers of *B paratyphosus,* twelve out of twenty-four, besides one from whose discharges both *B typhosus* and *B paratyphosus* were isolated The one remaining state institutional patient was recognized as a paratyphoid carrier after having given rise through direct contact to at least three cases among her associates

The five carriers in this group who were inmates of sanatoriums were found in a study[2] of the Widal reaction in the tuberculous One showed the presence of *B typhosus* in the feces and gave a history of typhoid fever thirty-three years previously From the discharges of the other four, *B paratyphosus* was isolated One of these gave a doubtful history of typhoid fever, but the remaining three gave no typhoid history

Group 2 This consists of thirty-nine carriers, thirty-two of *B typhosus* and seven of *B paratyphosus,* found in the routine epidemiologic investigations of sporadic cases during the three-year period

REPORT OF CASES

Case 7 (Dec. 26, 1914) —Mrs K. K., aged 65, gave a history of fever for seven weeks in 1894, no diagnosis being made Mrs K. K and her husband had a small farm and kept seven cows, supplying milk butter and cheese to neighbors Three neighbors who boarded at the K K. house developed typhoid one in 1900 one in 1901 and one in 1902. In 1904 a woman from Norway visited the K. K farm and developed the disease after three weeks stay there and became a paratyphoid carrier (Case 10 of this series) In 1908 an employee developed typhoid and died, and in 1912 and 1913 two other employees contracted typhoid In 1914, three persons in a neighbor's family who used milk from the K K. farm and one visitor at the farm were infected One of these became a chronic carrier (Case 9) Four cases, including one fatal one occurred the same year in a veterinarian's family supplied with cheese from this farm. In 1915, after K K. had been identified as a carrier and given instructions for proper care of her discharges, she infected a boy who boarded there for a short time

Case 11 (Feb 17, 1915) —Mrs G H S, aged 37, had typhoid in 1906 and was operated on for gallstones four months later Two sons in 1907 a farm hand in 1912 and a daughter in 1914 contracted typhoid

Case 31 (May 19, 1916) —Mrs G S, aged 53, gave no history of typhoid but because of cases occurring on the farm the examinations were made The following five cases occurred on the farm, in an employee in 1898, another employee in 1900, a sister in 1902, a grandson in 1911 and a son in-law in 1913

Case 34 (June 6, 1916) —Mrs H B, aged 56, gave no history of typhoid or of any sickness resembling it She milked four cows and supplied five families with the milk Typhoid occurred in eight users of the milk one in 1912, three in 1913, two in 1914 and two in 1916 After her identification as a carrier, at which time she was ordered to give up the milk business another case occurred in the neighborhood On investigation it was found that she had resumed the selling of milk and was supplying it to this person

REVIEW OF CASES

The larger number of the specimens from this series of cases were collected without the assistance of a nurse, the epidemiologist directing the wife or mother in the household as to the use of a laxative and the cleansing and disinfecting of the receptacles Sterile bottles were furnished for the transmission of specimens to the laboratory

The possibility of contamination of the specimens from one person by another in the same household was brought out in Case 23 Following this, more specific directions were given, but two months later, when a similar instance occurred in Case 30, a complete new outfit was devised and used This outfit consists of a corrugated pasteboard shipping box containing

Two sterile paraffined pasteboard boxes (oyster pails), two sterile tongue depressors, two sterile 4 ounce pomade bottles, one data card, and a leaflet giving the following directions

1 Give persons from whom specimens are to be collected a laxative
2 Remove paper containers from packing case and remove contents from them
3 Have patient pass stool directly into one of the sterilized paper containers.
4 By means of the enclosed sticks, transfer to one of the sterile bottles part of the last portion of the stool passed, preferably soft or semifluid material
5 Have patient pass urine into the other paper container
6 Pour some of the urine into second sterile bottle
7 Label both bottles with patient s name, and date and hour of collection of specimen
8 Cork tightly and wrap both bottles in cotton, and pack in the outer container in which bottles were received Destroy in a safe manner the paper containers and sticks
9 Ship these specimens at once by *express* not mail Specimens must reach the laboratory in the shortest time possible. Therefore telephone or telegraph the laboratory of the State Board of Health Minneapolis, at our expense, notifying us of the train on which the specimens are being sent so that the train may be met at the Minneapolis depot, and the specimens received in the shortest time possible
10 Please do *not* send specimens that will arrive on Saturday after noons Sundays or holidays.

Train leaves at

Cases 23 and 30 gave a history of typhoid, but in each case the Widal reaction was absent at the time of the investigation Both cases are omitted from the table, there being but one colony of *B typhosus* found on the plates in each instance, and in two later examinations in Case 30 no typhoid bacilli were found

The tables show that 220 cases, including twelve fatalities, have been traced to these thirty-seven carriers, an average of six cases per carrier Six of the 220 patients are known to have become chronic carriers Omitting the paratyphoid carriers, we have 213 cases due to thirty carriers, or an average of seven cases each Of the thirty typhoid carriers, twenty-five gave a history of previous typhoid and five gave no such history Three of these five patients were members of groups suspected on epidemiologic evidences of containing one or more carriers In the fourth, Case 34, the epidemiologic investigation pointed directly to this person as a carrier The discharges from these four persons were searched for typhoid bacilli on the finding of agglutinins in the blood The fifth, Case 20, was found in the course of a thorough dairy inspection following the appearance of typhoid fever in an employee Since the Widal reaction in this case was absent at the time of the investigation and present ten days later, it appears that this person was either a transient or a precocious carrier (Sacquepee)

---

[1] McDaniel Orianna and Wade E. M The Significance of Typhoid Carriers in Community Life with a Practical Method of Detecting Them Am. Jour Pub Health, 1915 5, 764

[2] Chesley A. J and Wade, E M Proc Nat. Assn Study and Prev Tuberc, 1915 p 250

Of the typhoid carriers, twenty-five of the thirty were females Of the five male carriers in this group, only one is known to have infected a large number of persons, ten, one infected three persons, and another is known to have infected one Of the twenty-five female carriers from whom it has been possible to trace secondary infections, an average of eight cases has been traced to each From the nature of their occupations, a larger proportion of female carriers would be likely to *infect others*, and hence one might expect to find more carriers among women than among men in routine investigations into the source of infection in sporadic or endemic typhoid No summary has been made of the carriers reported in the literature as to sex incidence, but it seems apparent that in the large number of carriers that have been detected in ordinary every-day life, women are considerably in excess of men In Group 2, routine investigations, the proportion of female to male carriers is 5 1 In our institutional series (Group 1), the proportion of male carriers to female was as 1 4 1, the population consisting of 1 2 males to 1 female In those persons merely suspected of being carriers, that is, in whom the Widal test was positive but in whose discharges typhoid bacilli were not found, possibly owing to the few examinations made, the proportion of males to females was but slightly less than that of the proved carriers

The ages of the identified typhoid carriers in our routine series varied from 32 to 83 years, with the exception of two men, aged 21 and 28, to whom no cases were traced All women carriers were aged 30 or over, and all but five were 40 years or more of age, the average age being 52 years The lapse of time between infection and identification of the carrier condition of the women, when time of typhoid fever was known, varied from one to 40 years, averaging 11 2 years, leaving the average age at the time of infection 40 8 years

The average age of the male typhoid carriers was 48 years and the average duration since typhoid infection was five years, leaving the average age at time of infection as 43 years

Of the seven paratyphoid carriers, six gave a history of clinical typhoid fever In Case 32, in which a history of typhoid fever was absent, the patient was the husband of a carrier of typhoid bacilli (Case 31) who also gave no history of typhoid fever

In this group there were six men and one woman Six cases were traced to two of the male carriers and

TABLE 1—TYPHOID CARRIERS

Case, Age and Sex	Widal Test	B Typhosus	Years Since Typhoid Fever	No Cases Infected	Members of Family	Employees and Boarders	Relatives	Neighbors	Deaths
1—40—F	+	Feces	16	4	1	2	1	0	1
2—68—F	+	Feces	5	15	2	4	6	3	0
3—68—F	+	Feces	28	23	0	0	6	17	0
4—83—M	+	Feces	8	3	2	0	0	1	0
5—79—F	+	Feces	3	8	1	5	2	0	0
6—54—M	+	Feces	1	10	0	1	9	0	1
7—66—F	Atypical	Feces	20	16	0	9	0	7	2
8—65—F	+	Feces	6	3	0	0	3	0	0
9—54—F	+	Feces	1	0	0	0	0	0	0
11—37—F	+	Feces	9	4	3	1	0	0	0
12—34—F	+	Feces & Urine	15	3	2	1	0	0	0
13—40—F	+	Feces & Urine	4	11	3	0	0	8	0
14—72—F	Atypical	Feces	40	19	6	3	6	4	1
15—55—M	+	Feces	14	1	0	0	0	1	0
16—32—F	+	Feces	1⅓	0	0	0	0	0	0
17—65—F	+	Feces & Urine	1½	1	0	0	0	1	0
18—45—F	+	Feces	6	3	2	1	0	0	0
20—28—M	+	Feces		0	0	0	0	0	0
21—48—F	+	Feces	4	1	1	0	0	0	0
22—57—F	Atypical	Feces & Urine	30	8	0	0	0	8	2
24—21—M	+	Feces	2	0	0	0	0	0	0
25—34—F	+	Urine	⅓	1	1	0	0	0	0
26—58—F	+	Feces		0	0	0	0	0	0
27—34—F	+	Feces		30	2	1	9	18	3
29—46—F	+	Feces	5	0	0	0	0	0	0
31—53—F	Atypical	Feces		5	0	2	3	0	0
34—56—F	+	Feces & Urine		9	0	0	0	9	0
36—78—F	+	Feces	3	3	1	0	2	0	0
37—56—F	+	Feces	32	25	0	0	0	25	0
39—59—F	+	Feces	5	7	1	0	0	6	2
52 8 (aver)			10 4 (aver)	213	28	30	47	108	12

TABLE 2—PARATYPHOID CARRIERS

Case, Age and Sex	Widal Test		B Paratyphosus	Years Since Typhoid Fever	No Cases Infected	Members of Family	Neighbors	Deaths
	Typhoid	Paratyphoid						
10—44—F	—	+	Urine	10	1	0	1	0
19— 3—M	+	+	Feces	1⅓	0	0	0	0
28— 6—M	—	0	Feces	2	0	0	0	0
32—57—M	—	0	Urine	—	0	0	0	0
33—23—M	Slight	+	Feces	3	0	0	0	0
35—34—M	+	+	Feces	1	2	2	0	0
38—20—M	0	0	Feces	½	4	0	4	0
26 7 (average)				3 (aver)	7	2	5	0

one to the female carrier The remaining four carriers, so far as is known, have not given rise to any cases

The paratyphoid carriers averaged only 26 7 years of age at the time of detection, and the time intervening between infection and identification averaged only three years

The high percentage of positive Widal reactions in the blood of the carriers here reported is notable In the carriers of *B typhosus*, all but two gave either a complete or a partial reaction (twenty-six complete, four atypical) In Cases 23 and 30, in which the Widal reaction was absent, the possibility of contaminated specimens having been sent for examination must be considered It might be held that if in the suspected groups the discharges from a greater number of persons in whom the Widal reaction was absent had been examined, more carriers would have been found In response to such a suggestion, it can be said that in some of the suspected groups the discharges were examined with negative results in from three to twenty-nine persons in whom the Widal reaction was absent, and further, that no later cases occurred in the various communities after these carriers were detected and placed under proper supervision It is true that in each of three communities one case of typhoid fever occurred following the detection of their respective carriers, but on investigation the infection was traceable in each instance to the negligence of the already identified carrier (Cases 5, 7 and 34)

Certain factors which tend to stasis in the gallbladder are thought to have their influence on the development of cholecystitis and cholelithiasis These factors, many of which are present in those advanced in years, or in women, have often been enumerated in explanation of the fact that gallbladder troubles are more prevalent after middle life than before, and in women than in men If this explanation of the age and sex incidence of gallbladder infections is correct then we should expect to find a higher proportion of carriers in those who undergo a siege of typhoid fever late in life and in women rather than in the young and in men

In our routine series, the average age at time of infection, over 40 years, appears strikingly suggestive when it is remembered that typhoid fever is most prevalent among the young The proportion of female to male carriers in this series, 5 1, appears to tally fairly closely with the sex incidence of cholecystitis and cholelithiasis in general

It is regretted that a more complete study of the cases in the institutional series could not have been made Possibly a knowledge of the age incidence of the infection of the identified carriers in this series would explain the lesser proportion of female to male carriers

---

The Profession in the Netherlands—Some recently published statistics show that there are 3 167 physicians in the Netherlands (population over 6 millions) The number of those who obtained elsewhere their license to practice is 2 497 There are 1,695 medical students in the various universities, including 224 women This is an increase over a year ago when the figures were respectively 1 521 and 175 In 1915 there were 1 565 and in 1914, 1,790 The mobilization of the troops explains the drop since There are thirty-three asylums for the insane, and they are caring for 7,549 men and 7 464 women, a total of 15,013, an increase of 500 over last year

---

RAPID REDUCTION OF INTRA-OCULAR TENSION IN GLAUCOMA

BY TIMED INTRAVENOUS GLUCOSE INJECTIONS *

W D SANSUM, MD
CHICAGO

In the course of studies with timed intravenous injections of sugars, salts, etc , several phases of which have been previously reported by Woodyatt, Sansum and Wilder,[1] observations have been made on possible clinical uses of the rapid dehydration of the organism which may be produced when sugar or salts are injected uniformly into the vein at rates which lead to the excretion of water through the kidneys faster than water is administered with the sugar or salt

When glucose is injected by vein uniformly at or below the tolerance limit which, in normal resting individuals, lies as a rule between 0 8 and 0 9 gm per kilogram of body weight per hour, there is no increase in the rate of diuresis greater than can be accounted for by the extra water given[2] In fact, a definite antidiuretic tendency manifests itself[3] But when glucose is injected so fast as to produce a sufficiently rapid excretion of glucose, increased diuresis results, and then if the water injected with the glucose is less than that excreted in the urine, the tendency is toward dehydration By employing 36 to 54 per cent glucose solutions and injecting them at rates corresponding to from 3 6 to 5 4 gm of glucose per kilogram per hour, heavy glycosuria and rapid dehydration occur

The question arises as to whether or not and to what degree fluid can be drawn to advantage from a localized area such, for example, as a blister, an effusion in a serous cavity, a glaucomatous eye, or the like An opportunity for experimental study presented itself when Dr E V L Brown asked that we attempt to lower the intra-ocular tension in a certain case of glaucoma then under his observation Three successful attempts with this case led to the application of the same principle in a second case on the service of Dr William H Wilder The results obtained are reported in the belief that the principles and methods employed will be found of clinical interest It is not improbable, however, that the details of the operation as here described might to advantage be modified, since it would appear that the dehydration was unnecessarily rapid and that equivalent beneficial results might be attained with less risk of harm by a more gradual procedure

REVIEW OF THE LITERATURE

The abstraction of fluid from the body as a whole, including the eye, is by no means a new idea in the management of glaucoma, for among the accepted treatments are free elimination by sweating, diuresis and catharsis Local abstractions of fluid by the application of leeches or the subconjunctival injection of salts are also well known procedures According to Fischer's[4] theory of glaucoma, the condition constitutes essentially a local edema, a swelling of the ocular colloids, especially of the vitreous, due to an increased affinity of the colloids for water As salts in suitable concentrations may cause the separation of water from swollen protein gels, so in an analogous manner they may lower the tension of an eye On the basis of experiments showing the parallel effects of salts on enucleated eyes and on protein gels, Hayward and Fischer[5] suggested both local and general treatments, the former consisting in subconjunctival injections of from eighth molecular to sixth molecular (from 4 05 to 5 41 per cent) sodium acetate solutions, the latter in rectal administration of from 1,000 to 1,500 c c of Fischer's hypertonic salt solution Both in their hands gave beneficial results Hertel[6] used hypertonic salt solutions to lower intra-ocular tension as a preliminary step to iridectomy He reports one case in which, following the intravenous injection of 120 c c of a 10 per cent solution, the intra-ocular tension fell from 72 to 30 mm of mercury The time or rate of injection was not stated In another case following the oral administration of 200 c c of the same solution, the tension was lowered from 80 to 22 mm of mercury He also used hypotonic solutions to restore ocular tension in the hypotonia found in such conditions as diabetic coma In this connection it is interesting to note in anticipation of what follows that the "soft eyeball" which may be encountered in diabetes would appear to be merely a part of that general dehydration of the body which goes hand in hand with sugar diuresis and other manifestations of the effects of excessive quantities of free glucose in the body

---

* From the Otho S A Sprague Memorial Institute for Infectious Diseases Rush Medical College

[1] Woodyatt R T Sansum W D and Wilder R M Prolonged and Accurately Timed Intravenous Injections of Sugar The Journal A M A Dec 11 1915 p 2067 Woodyatt R T Studies in Intermediate Carbohydrate Metabolism Harvey Society Lecture, 1916

[2] Wilder R M and Sansum W D d Glucose Tolerance in Health and Disease, Arch Int Med February 1917 p 311

[3] Woodyatt R. T , and Sansum W D Jour Biol. Chem 1917, **30**, 155

[4] Fischer M H. Arch f d ges Physiol (Pfluger's), 1908 **125**, 396, 1909 **127**, 1

TECHNIC

The glucose employed was a chemically pure product prepared in this laboratory The details of its preparation are described elsewhere[3] The water was freshly distilled with the same precautions as are observed in its preparation for salvarsan administrations Approximately 2 to 3 molecular (36 to 54 per cent) glucose solutions were made up by weight, carefully filtered and sterilized in the autoclave The exact titer was then determined in each case by the polariscope The volumetric pump has been described in detail in a recent communication[7] The details of operation, with the arrangement of the apparatus, also have been described elsewhere[2] The rate of injection will depend on the titer of the solution used, the nature of the case, and the quantity of water it is desired to abstract from the body in a specified time The slower rates of injection extending over two hours or more tend to eliminate the chill and lessen the dangers attendant on the too rapid increase of intravascular pressure and decrease of intra-ocular tension Other things being equal, the higher the rate of glucose injection and the less the water given with the glucose, the greater the dehydrating power A 54 per cent. solution given at a rate corresponding to 3 6 gm of glucose per kilogram per hour (that is, 6 66 c c of a 54 per cent solution per kilogram per hour) has greater dehydrating power than the same quantity of glucose given in the same time in the form of a 36 per cent solution (that is, 10 c c of a 36 per cent solution per kilogram per hour) With a solution of fixed concentration (as 54 per cent), the degree of dehydration will be proportional to the quantity given in a specified time The intra-ocular tension was taken with a Gradle-Schiötz tonometer by the ophthalmologists in charge of the case

CASE HISTORIES AND EXPERIMENTS

Case 1—This was one of syphilitic iritis plastica with secondary glaucoma on the service of Dr E V L Brown, who provided the following history

History—Mrs S, colored, widow, aged 52, was admitted to the Cook County Hospital, Dec. 1, 1915, complaining of pain and swelling in the left eye, photophobia, headaches, joint pains and a fading maculopapular eruption on the body The eye trouble had begun about two weeks before admission with redness and photophobia in the left eye followed by failing vision and joint pains which grew progressively worse The rash, accompanied by sores in the mouth and headaches, had appeared about six weeks prior to admission. The past history was negative

Physical Examination—The patient is a fairly well developed but poorly nourished negress She appears ill and as if she had recently lost in weight and strength.

Eyes There is slight edema of the conjunctiva of the right eye The left eye is nearly closed, owing to edema of the lids There is profuse lacrimation and chemosis of the bulbar conjunctiva The cornea is dulled and everywhere overstrewn with epithelial pits The stroma is clear There is no gross keratitis punctata There is marked ciliary and conjunctival injection Two thirds of the anterior chamber is obliterated totally in the sector corresponding to that between I and VII of the clock dial, and half obliterated in the sector between VII and I by the anteriorly displaced iris The central one fourth of the chamber is normal in depth The very irregular, 2 mm pupil is completely encircled by posterior synechias, and is blocked by a greenish white, nonvascular exudate There is a sail-like forward bulging of the body of the iris (*iris bombe*) There are no condylomas or tuberculous nodes, although the iris is furrowed radially from the pupillary border one-half way to II of the clock dial and less deeply to XI The iris markings are blurred, but otherwise the tissue is not much changed The crystalline lens and entire back of the cornea are covered by very fine discrete gray flecks of exudate. R V, 3/10, L V, shadows Tension, right, 18¾, left, 54 mm of mercury The synechiae are uninfluenced by the use of atropin

Mouth One small area suggests a mucous patch Neck There is cervical and submaxillary adenopathy Chest Negative The heart tones and borders are normal Blood pressure, 135 systolic and 80 diastolic Genitalia There is inguinal and femoral adenopathy Extremities There is marked epitrochlear adenopathy Skin Across the forehead, about the eyes, and on the upper forearms are numerous split-pea sized, flat, slightly elevated papules which appear a little darker than the normal skin Laboratory Urine, normal Wassermann reaction in the blood plasma + + + Complement fixation test for gonorrheal infection in the blood plasma +

Therapeutic Dehydration—An iridectomy for the immediate relief of pressure would have been the procedure of choice, but, owing to the fear of complications, such as prolapse of the iris and intra-ocular hemorrhage from the too sudden lowering of tension, the surgeon preferred, if possible, to operate under more favorable conditions The proposal was therefore made to attempt the reduction of intra-ocular tension by general means December 6, after a careful physical examination had demonstrated a sound cardiovascular-renal system with the blood pressure within normal limits, the patient received 41.2 per cent. glucose solution *by vein* at the rate of 11.2 c c per kilogram per hour for sixty-nine minutes The 47 5 kg patient thus received in sixty-nine minutes a total of 612 c.c. of 41 2 per cent glucose solution containing 252 gm of glucose and approximately 471 c.c of water As the result of the injection, the patient passed 2,247 c.c of urine, as against the 471 c.c of water injected with the glucose, thereby creating a water deficit in the body of 1,776 c.c or 37 4 c c per kilogram The blood pressure before the operation was 135 systolic and 80 diastolic During the injection it rose to 155—100, and after the injection it fell to 95—65, systolic and diastolic, respectively On the following morning at 10 30 it had risen to 120 systolic and 90 diastolic Th-temperature before the injection was 98.4 F. One hour after the injection it was 102. It then gradually declined to normal in the course of twenty-four hours. Toward the end of the injection for twenty minutes the patient shook as though in a chill but did not complain of any discomfort. The intra-ocular tension before the injection was 60.5 mm. of mercury and fell to 26 mm. In the right or normal eye it fell from 15.25 to 12.25. The fall in tension was so striking that the question was raised as to whether if the operation were repeated and followed by a suitable after-treatment the advantage gained might not be maintained for a long enough time to preclude the necessity of operation entirely.

---

[5] Hayward, G T, and Fis[illegible]r, M H Ann Ophth, 1910, 19, 40

[6] Hertel Arch f Ophth ([illegible]tler), 1915, 90, 309

[7] Woodyatt, R T Jour B[illegible] Chem, 1917, 29, 355

Second Dehydration.—December 14, the treatment was repeated. This time an effort was made to abstract the water more gradually. The patient received a 38.9 per cent. glucose solution by vein at the rate of 8.7 c.c. per kilogram per hour for 108 minutes. The 45 kg. patient thus received in 108 minutes 702 c.c. of 38.9 per cent. solution containing 273 gm. of glucose and approximately 548 c.c. of water. As a result of the injection the patient passed 2,359 c.c. of urine while receiving 548 c.c. of water with the glucose, thereby creating a water deficit in the body of 1,811 c.c. or 40 c.c. per kilogram. The tension in the left eye fell from 54 to 18 mm. of mercury. In the right or normal eye it fell from 15.25 to 7.25. In this instance the blood pressure reached a maximum of 185 mm. There was a 'chill' lasting forty minutes. The temperature rose to 102.2. The after-treatment consisted in the limitation of the total water intake to 2,000 c.c. in twenty-four hours, with fifteen doses each consisting of 1 gm. of sodium bicarbonate and 0.66 gm. of sodium acetate with compound jalap powder and magnesium sulphate enough to produce three or four watery stools daily. The after-treatment failed. The patient complained of thirst, and the intra-ocular tension gradually rose, reaching 44 mm. of mercury by the end of twenty-four hours, when the treatment was stopped because of nausea. After this the tension gradually rose, reaching 47 in three days and 66.75 by the end of a week.

Third Dehydration.—This was performed December 21, as a preliminary measure to an iridectomy. The procedure was carried out still more slowly than in the second injection. The patient received 36 per cent. glucose solution at the rate of 7.7 c.c. per kilogram per hour for 115 minutes. Thus the 45 kg. patient was given 662 c.c. of 36 per cent. solution containing 238 gm. of glucose and approximately 530 c.c. of water. The urine totaled 2,275 c.c., while 530 c.c. of water were injected with the glucose. A water deficit of about 1,745 c.c. or 39 c.c. per kilogram was therefore produced. Although nearly as much water as before was abstracted the time consumed was longer and there was in this instance no chill. The temperature rose to 101. The systolic blood pressure reached 148 and the diastolic 100 mm. of mercury. The intra-ocular tension was reduced from 66.75 to 37.75. This reading was taken just before the close of the injection, but at the time of operation thirty minutes later, it was normal to palpation. Iridectomy was then performed by Dr. Brown. The patient was put on an antisyphilitic management and made an uneventful recovery. The cornea became clear. The hyperemia and the anterior synechiae disappeared. The tension remained so low that it was impossible to make satisfactory readings.

The foregoing results were taken to demonstrate the feasibility of lowering intra-ocular tension in a case of the type described, but the question remained as to whether or not parallel results could be obtained in a case of so-called primary glaucoma.

Case 2.—This was one of very severe acute, primary glaucoma that developed after the patient had been in the hospital about a month and in spite of careful medicinal and surgical management. The patient was one of Dr. W. H. Wilder, who kindly furnished the history.

History.—Mrs. Jane G., aged 46, with glaucoma, was first examined by me, Jan. 1, 1916. She gave a history that one and a half years before the sight of the right eye began to fail and examination by a specialist revealed that the fields were contracted. About June 1, 1916, she noticed that the central vision of the right eye was much reduced. At times she has had pain in the eyes and has noticed rainbows about a light. Recently the sight of the left eye has been clouded, especially so when she feels nervous.

R. V. with sph. 6.00, cyl. 2.00, axis 90° 20/70
L. V. with sph. 6.50, cyl. 1.75, axis 110° 20/30

Disks: The right is deeply cupped, about 2 mm. In the left there is a deep physiologic cup, but the edges are normal. The vessels are somewhat congested. The intra-ocular tension in the right eye is 55 and in the left 25 mm. of mercury. Fields: It is impossible to chart the fields of the right eye. In the left eye the white is somewhat contracted above and below. The red reads: above, 18°, below, 18°, nasal, 18°, and temporal 55°. The green reads: above, 10°, below, 10°, nasal 12° and temporal, 40°.

I advised an operation on the right eye and later on the left eye if the tension should become increased. June 26, 1916, at the Presbyterian Hospital I did an Elliot trephining on the right eye with good results. About two weeks later the tension in the left eye became high and the patient had an acute attack of glaucoma in this eye. July 14, I did an iridotasis on the left eye and at the same time an iridectomy on the right eye for the tension in that had risen again. The right eye quieted down following this iridectomy. The left eye recovered well from the iridotasis and remained low or normal for a few days, when the patient again had an acute attack of glaucoma with a tension up to 60 mm. of mercury, shallow anterior chamber, and violent pain requiring narcotics.

Therapeutic Dehydration.—An iridectomy for the immediate relief of pressure would have been the operation of choice, owing, however, to the fear of complications such as prolapse of the iris and intra-ocular hemorrhage from the too sudden lowering of tension the surgeon preferred to work under more favorable conditions. Knowing of the work on the previous case Dr. Wilder asked that we attempt to lower the tension in this case by the intravenous injection of glucose in preparation for an iridectomy. A careful physical examination showed that the heart, blood vessels and urinary system were in sufficiently good condition. The systolic blood pressure was 146 and the diastolic 100 mm. of mercury. There was a marked edema of the lids and surrounding tissues. The intra-ocular tension was 60 mm. The anterior chamber was obliterated. July 20, the patient received 55.2 per cent. glucose solution by vein at the uniform rate of 10 c.c. per kilogram per hour for seventy-six minutes. The 60 kg. patient thus received 691 c.c. of 55.2 per cent. glucose solution containing 380 gm. of glucose and approximately 491 c.c. of water. As a result of the injection there was passed 1,250 c.c. of urine as against 491 c.c. of water injected with the glucose, thereby creating a water deficit in the body of 759 c.c., or 13 c.c. per kilogram. The intra-ocular tension as observed by Dr. W. H. Wilder fell from 60 to 20 mm. of mercury. There was no chill. The temperature rose to a maximum of 101. The iridectomy was then performed by Dr. Wilder under light ether anesthesia. Before and during the first part of the injection the patient suffered greatly from pain in the eye and was very restless. During the latter part the pain wholly disappeared and the patient became quiet and went to sleep. *The edema of the lids and surrounding tissues disappeared entirely under the eyes of the observers during the injection.* The anterior chamber remained very shallow. The high rate of injection was chosen in this instance because the patient had been taking large doses of morphin which it was feared might retard the liberation of water, although it was not known by experiment that such would be the case. Dr. Wilder provides the following notes on the subsequent clinical history of the case:

Subsequent History.—Before the iridectomy, July 20, 1916, the tension was lowered by the intravenous injection of glucose solution by Dr. Sansum and Dr. R. M. Wilder. This lowered the tension to 20 mm. of mercury, and an iridectomy was satisfactorily done under ether narcosis administered by Dr. Herb. The eye quieted after this operation, and in one week the patient left the hospital. The tension remained normal, but the patient continued using 1 per cent. physostigmin (eserin) and 5 per cent ethylmorphin hydrochlorid (dionin) She was weak for some time, and the elixir of iron, quinin and strychnin was prescribed The tension seemed increased at times Feb 10, 1917, it was 35 mm Feb 21, 1917, R. V 0, L V with sph 200, cyl 5 50, axis 15° 20/30 These lenses were ordered in tinted glass and the physostigmin and ethylmorphin hydrochlorid continued The right optical disk was deeply cupped and the left slightly cupped

COMMENT

The theory of the nature and mechanism of glucose diuresis has been discussed elsewhere[3] and need not be repeated here The increased temperature observed with each of the injections is a phenomenon which we have encountered in the course of intravenous glucose injections in animals when dehydration has been pushed beyond a certain degree The same applies to the chill A discussion of the theoretical significance of the fever and chill would be irrelevant in this place The increased blood pressure is associated with the increased blood volume due to the flow of water into the blood owing to the presence in the blood of increased quantities of free glucose [8]

Attention is directed to the temporary but marked elevation of blood volume and blood pressure during the intravenous injection of glucose because an injudicious application of the principle of intravenous sugar or salt injection to cases in which the cardiovascular system was impaired might lead to deleterious effects In the cases here reported the treatment was not instituted without a careful preliminary consideration of the heart, vessels and renal function A powerful procedure such as this, which is capable of radically lowering intra-ocular tension and simultaneously elevating the intravascular tension, should obviously not be undertaken blindly or without due care in cases in which the condition of the vessels, especially those within the eye, would render them liable to rupture by a too rapid change of pressure relations As stated at the outset, the details of the operation as here described are not presented as necessarily the most appropriate for clinical work generally They might be modified in other cases and in the light of further experience

By a suitable selection of the rate of glucose injection and of the quantity of water abstracted in a given time, it should be possible to control to a nicety the rate and degree of ocular pressure reduction to meet the demands of the ophthalmologist In this connection it may be noted that the possibility of positive control is greater than it is in the ordinary local operative procedures which are in general use by ophthalmologists

The experiments demonstrate without any question the possibility of quickly lowering intra-ocular tension in the types of glaucoma described and in the normal eye

It is not the purpose of the present report to decide when a procedure of the kind herein described should have the preference over other known resources in ophthalmologic practice It appears to offer a means of lowering intra-ocular tension to a degree and at a rate chosen by the surgeon either in a normal or a glaucomatous eye It would appear to be a method particularly sensitive to control and especially fitted to meet the demands for a rapid temporary reduction of intra-ocular tension to prevent the damaging effects of mechanical pressure and to pave the way for a surgical operation which cannot be safely or satisfactorily performed with the existing intra-ocular tension The advantages or disadvantages of the method as compared with cyclodialysis, sclerotomy, etc, could be stated only after further investigation by specialists

---

HOOKWORM CONTROL IN SOUTH CHINA

BASED ON A PRELIMINARY STUDY OF THE INCIDENCE OF HOOKWORM INFECTION IN HUNAN PROVINCE, CHINA

EDWARD H HUME, MD
CHANGSHA, CHINA

The problem of the control of hookworm infection in South China differs in so many essentials from the same problem in America and in other Western countries that its solution will require long planning by specialists and a persistently carried out program of practical endeavor In many of the American states, the carelessly built latrine, or its total absence, has made soil pollution frequent In India, in the rural districts, human excrement is deposited directly on the soil, but without any organized system of using it for fertilizer In South China, however, it is the custom to collect it in earthen jars and to ladle it out from these into buckets to be hurried out to the fields and gardens for fertilizer Each farmer or gardener has a little cesspool into which the bucket contents are poured for storage Fertilization is not limited to manuring the ground, but, especially in vegetable gardens, suitable aqueous dilutions of the pool contents are sprinkled over the growing crop at appropriate intervals, the human excrement being literally smeared over the vegetable leaf Later, when these vegetables reach the kitchen, they frequently receive cooking that falls far short of sterilization With such methods of enrichment, followed by scant cooking, the wonder is, not that some of the people have intestinal disease and parasitic infection, but that any one escapes We may thus note at the outset that the study of hookworm in China is complicated by many factors not present in other lands Some of these are

1 The universal use of human excrement for fertilizer

2 The consequent and continuous discharge of effluent, containing parasitic ova and larval forms, into streams contaminating both their waters and the soil of their banks

3 The presence of disease due to other animal parasites, such as *Schistosoma japonica,* whose symptomatology resembles, in so many ways, that of hookworm infection

4 The frequency of concurrent infection with hookworm and malarial or other fevers, rendering it difficult to gage the exact morbid significance of each

It is my purpose, in this paper, to present a summary of recent surveys made to determine the extent of hookworm infection in Hunan province, and to discuss, in the light of these surveys, some of the factors bearing on its control in South China

HISTORICAL DATA

Jefferys and Maxwell[1] have pointed out that hookworm is to be found over wide areas of the country, being especially prevalent in the Yangtze River valley, in which Hunan province lies. No systematic survey had been attempted in Hunan before 1914, either of geographic districts involved or of occupational incidence, nor had any one described the special influences favoring transmission of the infection due to locality or mode of life. At the same time, reports show that very early in the history of medical missionary work in Hunan, the microscope had been faithfully used, especially in the larger cities, such as Changsha, Changteh, Hengchow, Siangtan and Yiyang. These reports are included in the statistical tables published by the research committees of the China Medical Missionary Association. Hookworm has been reported from every city in which fecal examinations have been made, both *Ancylostoma duodenale* and *Uncinaria americana* have been identified, the former more frequently.

---

[8] Compare Lusk Jour Biol Chem, 1912, 13, 27 Fisher and Wishart Ibid, 1912, 13, 4 Woodyatt and Sansum (Footnote 3)

[1] Jefferys, W H and Maxwell, J L. Diseases of China Including Formosa and Korea, Philadelphia, P Blakiston s Son & Co, 1910

The Rockefeller Sanitary Commission has published a report,[2] wherein it is said that "nothing is being done by the Chinese government or the Chinese to alleviate or eradicate the disease." This statement is unfortunately true. But it is true because the Chinese have not understood the nature of the danger or the method of its control, resembling in this regard the people of the southern United States, prior to the agitation of the past few years. As soon as the resultant benefits of action can be made clear to them, the Chinese can be counted on to act.

SURVEYS IN HUNAN (1914-1916)

Soon after my attention was called to the foregoing report on hookworm in foreign countries, I sought an interview with the director general of the International Health Commission, and it was largely due to his practical suggestions that plans were laid, early in 1913, for a comprehensive survey of hookworm infection in Hunan province. As a first step in carrying this out, Dr. A. C. Reed of the staff of Yale Hospital at Changsha, the provincial capital, was detailed to begin investigations at the Pinghsiang Colliery, one of the largest mines in China. This colliery is 90 miles from Changsha, just across the border from Hunan, in the province of Kiangsi. Its commercial relations with the rest of the country are carried on by way of Changsha, which lies in the same Central China valley. Reed[3] found a general incidence of 81.6 per cent. among all workers at the mining establishment, among those who worked underground the infection rate was 90.2 per cent., a figure that was probably minimal, as it is likely that the true incidence approached 100 per cent.

A preliminary survey[4] made in the city of Changsha during the same year, 1914, covering servants, students and others, showed a general infection rate for hookworm of 11.6 per cent., a figure which, again, must be regarded as minimal.

These reports made it clear that uncinariasis was as much of a menace in the mines and in the general urban population of Central China as in similar groups elsewhere in the world, it remained to be shown whether it was as prevalent in agricultural districts and in mines other than collieries.

I had some communication with the director general of the International Health Commission and, as a result, in the summer of 1915, this commission, after making an appropriation to aid in extending the survey, asked me to arrange for men to undertake the work.

During the autumn of 1915 and the winter following, the attempt of Yuan Shih-kai to become emperor was followed by political disturbances throughout all South China, making it impossible to extend the survey in Hunan over as wide an area as originally planned. However, during this time, and in the summer of 1916, observations were made in the agricultural district of Changteh, in the north of Hunan, far removed from the mining areas, and a careful survey was made in the summer of 1916 at Sinhwa, an active antimony mining district in the center of the province. Here, it was possible to study the spread of hookworm from an agricultural to a mining group of workers, and to determine its incidence under conditions differing both geologically and meteorologically from those found elsewhere in Hunan. The studies at Changteh were carried on by Dr. G. F. Tootell, and those at Sinhwa by Dr. W. S. Chow, the latter's full report (Hookworm Investigation in the Antimony Mines of Sinhwa, Hunan Province, China) will be published separately.

These four distinct surveys (Changsha, Changteh, Pinghsiang and Sinhwa) made in as many separate districts to the north, east and west of the provincial capital, may now be summarized and discussed with a view to the light they throw on methods for the eradication of hookworm and the even more fundamental problem of changing Chinese methods of sewage disposal.

TABLE 1.—*GEOGRAPHIC DISTRIBUTION OF HOOKWORM IN HUNAN*

(All classes of people and both sexes)

City	Number Examined	Hookworm Present	Hookworm Incidence Per Cent.
Changsha	120	14	11.66
Changteh	739	113	15.29
Pinghsiang	272	222	81.62
Sinhwa	210	27	12.86
Totals	1,341	376	28.04

The results in Changsha, Changteh and Sinhwa, as seen in Table 1, approximate one another very closely, the total of 1,069 cases examined in these three districts showing hookworm present in 154, an incidence of 14.4 per cent., a figure only slightly higher than that obtained in Sinhwa and Changsha, and but slightly lower than that at Changteh. The great disparity of the Pinghsiang figures arises from the fact that 225 of the 272 cases were found among underground workers, among whom indiscriminate defecation furnished abundant opportunity for infection through the feet. Other coolies at Pinghsiang, working in the washing plant above ground, showed a 57 per cent. incidence, while still others, in the machine shops, showed but 27 per cent. Even if we exclude the Pinghsiang returns, we find an incidence of 14.4 per cent. in a general population, somewhat predominantly agricultural, in other words, one seventh of the population is suffering from an infection, the eradication of which, in many other parts of the world, has been quickly followed by striking improvement in the physical and moral well-being of the individuals concerned.

As indicated in the comment on Table 1, the Pinghsiang figures, for special reasons, should be considered apart from the others. We have there a typical deep mine whose main adit penetrates the mountain side to a depth of a mile and a half. The workers in these depths are on long shifts, have no sanitary conveniences, and the heat and humidity are considerable

---

[2] Hookworm Infection in Foreign Countries, 1911, p. 57.
[3] Reed: Am. Jour. Pub. Health, 1914, 4, 1136.
[4] Reed: China Med. Jour., 1914, 28, 263.

Such conditions are ideal for the spread of hookworm At Sinhwa, on the other hand, the mines are exceedingly superficial, not penetrating at any point over 100 feet, with ready access to the surface at all times, with little humidity and with a very moderate temperature The figures seem to indicate that, if the agricultural workers from among whom the mining forces were recruited were originally infected with hookworm, the meteorological and other conditions in the mines were such as to permit a rapid reduction in the incidence of infection

We note in Table 2 that next to miners, farmers constitute the second group in which a high incidence of hookworm was observed This was true throughout Hunan, but particularly so at the Sinhwa mines, where the mine workers themselves showed a low rate The high percentage among the Sinhwa farmers may possibly be due to the greater poverty of the rural population there, with consequently less protection of the feet and legs

TABLE 2—OCCUPATIONAL INCIDENCE OF HOOKWORM INFECTION IN HUNAN

City	Number Examined	Hookworm Present	Incidence, Per Cent
Miners			
Changsha			
Changteh			
Pinghsiang	225	203	90 22
Sinhwa	63	4	6 35
Totals	288	207	71 86
Other Coolies			
Changsha	31	5	16 13
Changteh			
Pinghsiang	30	14	46 67
Sinhwa	86	6	6 98
Totals	147	25	17 00
Tradesmen			
Changsha	40	3	7 50
Changteh	5	1	20 00
Pinghsiang			
Sinhwa	12	3	25 00
Totals	57	7	12 28
Scholars			
Changsha	27	2	7 47
Changteh			
Pinghsiang			
Sinhwa			
Totals	27	2	7 47
Farmers			
Changsha	5	2	40 00
Changteh	17	8	47 06
Pinghsiang			
Sinhwa	17	12	70 59
Totals	39	22	56 41
Boatmen			
Changsha	3	1	33 33
Changteh			
Pinghsiang			
Sinhwa			
Totals	3	1	33 33
Miscellaneous			
Changsha	14	1	7 14
Changteh	17	4	23 53
Pinghsiang	17	5	29 41
Sinhwa	32	2	6 25
Totals	80	12	15 00
Totals, four cities			
Analyzed occupations	641	276	43 06
Or, excluding all miners	353	69	19 55
Or, excluding miners and farm hands	314	47	14 97

TABLE 3—HOOKWORM INCIDENCE BY SEXES IN HUNAN

	Number Examined		Hookworm Present		Incidence, Per Cent	
City	Male	Female	Male	Female	Male	Female
Changsha	86	34	13	1	15 12	2 94
Changteh*	22	11	9	3	40 91	27 27
Totals	108	45	22	4	20 38	8 89

* Observations made in territory known to be infected

In still another series of 700 cases reported from Changteh, 100, or 14 29 per cent , were found infected Of those infected, 90 per cent were males and 10 per cent females Reed[4] calls attention to the fact that the difference in the manner of living is enough to explain the widely different percentage in the two sexes A Chinese woman's feet are so cramped, while bound, as to limit locomotion, and yet the removal of the bandage removes from the foot its necessary support Limited locomotion and constant protection by bandages unquestionably save many women from skin infection Conversely, constant exposure of the bared feet and legs, such as occurs while farming or working on boats, accounts for the higher infection rate in males

In one of the Changsha cases, included in Table 4, *Schistosoma japonica* was present This fluke is very common in certain districts of Hunan, notably Siangyin and Yochow The incidence rate given for *Ascaris* (*75 08 per cent*) is certainly not exaggerated In a recent invesigation of fifty consecutive stools from a boys' mission school in Changsha, where food and sanitary conditions are as nearly perfect as can be found in the simple school life of China, well over 80 per cent were found infected with the eggs of *Ascaris* I believe this figure represents a common incidence in Hunan After all, the fundamental question in connection with infection by animal parasites concerns their morbid significance As found in China, are they directly or indirectly productive of ill health, or is their presence incidental and seldom pathologic? The Chinese believe it is beneficial to have a few roundworms present in the system, and but few Western physicians practicing in China believe that *Ascaris* can cause serious trouble What would be the hemoglobin index, the blood pressure, blood counts and opsonic index in persons freed from parasites, as compared with those infected, but in other respects similar? Light must be shed on these matters

SOIL POLLUTION AND HOOKWORM

The reports from Pinghsiang and Sinhwa clearly show that indiscriminate defecation in the mines is not prevented This single factor would suffice to account for infection contracted within the mines Outside of the mines, however, other factors must be sought, for such indiscriminate defecation is not common Males use the public privy and females use a commode the contents of which are later washed out and emptied into the public privy To one of the factors prevailing outside of the mines, namely, the fertilizing of arable ground with appropriate dilutions of human excrement, reference has already been made Containing, as this material does, all manner of parasitic ova and larval forms, the heavy incidence of hookworm among farm hands (Table 2) must be in large measure due to infection through the feet, as they come in contact with the contaminated soil Tootell, from Changteh, reports that laborers wearing no shoes had a much higher incidence than laborers *with shoes* Farmers in Hunan work either barefooted or with simple straw sandals the soles of which are certainly not impermeable to the moist soil, and afford no protection to the dorsum of the foot

Another factor is carelessness in transportation of the nightsoil buckets from city to suburb and country One has to walk in the train of a group of carriers to realize how the constant drip-drip from the buckets must be infecting the soil Every time a passer-by accidentally jostles a carrier, a little more is spilled, and, not infrequently, one comes on a scene of wreckage marking the spot where overstrain has caused rupture and total collapse of the bucket itself. Obviously, this type of soil pollution occurs along the paths from the city to the country and through the fields, endangering all who with unprotected feet traverse these routes.

Again, after the water standing in fields and gardens has had time to become heavily infected, it flows on into another pool, soon reaching some little stream, contaminating both its waters and the soil of its banks, thus bringing the hookworm menace close to the feet, the legs and even the arms of boat hands as they work about their little craft. Here we have a third mode of infection.

THE NATURE OF THE HOOKWORM PROBLEM

We now see that the problem of hookworm involves the whole problem of the use of nightsoil as a fertilizer in fields and gardens, with the consequent contamination of streams and their shores, the problem of sanitation within mines, and, in a more general way, the question of the net morbid influence of hookworm existing, as it does everywhere, concurrently with tuberculosis, syphilis and infection with other animal parasites. While these factors seem wholly different, there are many, after all, that relate the problem of hookworm in China quite closely to the same problem in America. For, however direct and frontal the attack on it may be in America, by dispensary treatment or intensive method, there must always be a deeper, if more indirect, attack by fighting the evil of the insanitary latrine. It is just as true of China as of America, that "curing persons of hookworm infection is of little value unless steps are taken to prevent reinfection."[5] The ultimate problem in China may be stated in terms that do not include the actual "hookworm." It is, "to find a satisfactory method for the disposal of sewage at the farm home, one which the people in rural communities may be brought to adopt and to carry out, and one which will prove to be safe in actual experience under the conditions which prevail in these communities."[5] The only difference between the interpretation of this statement in America and in China is that the word "disposal" would connote in America merely the thought of getting rid of the material, while in China it would mean the utilizing of the nightsoil, after its removal from the latrine buckets.

THE SOLUTION OF THE HOOKWORM PROBLEM

Stated briefly, the solution of the hookworm problem for Hunan and for all China may be summed up in three words, survey, suppression and substitution.

Survey.—The extent of the problem must be determined. Practically all the work hitherto done in Hunan comes under this head. We know now that the incidence varies all the way from 6 per cent in one group of workers, at a certain place, to 90 per cent in another group, elsewhere. We know that miners and farmers are the two classes most subject to infection, although later inquiry may possibly show that boatmen are also among the heavily infected groups. Further surveys, both extensive and intensive, are urgently needed both in Hunan and elsewhere in China, but they must be equipped to go farther than merely to record incidence. They must try to determine the physical and economic significance of hookworm disease in the presence of almost universal infection with either tuberculosis or syphilis. They must try to gage its effect on the human economy as compared with that of other animal parasites and bacterial infection.

Further, every survey must frankly recognize the difficulties to be overcome. In China, these come largely under the heads of ignorance, custom, lack of capacity for sustained effort, and financial stringency. The ignorance is natural. Even in Western lands, the word "hookworm" was not in current use a few years ago, and in China it is not strange that so few understand what infection is, moreover, among the Chinese coolies, the persons most seriously concerned in the present discussion, indifference is frequently an outgrowth of ignorance. If not absolutely indifferent to the hygienic instruction given, they are at least apt to look with suspicion on any new proposal, for fear it shall deprive them of something they regard as theirs by right, or for fear it shall prove to be a foreign idea likely to do them harm. It is both financially profitable to market nightsoil and agriculturally indispensable to use human excrement for fertilization purposes in a land where horses and cows are few. Necessity is laid on the scientist and economist to conserve whatever he can of an ancient custom, at the same time that he seeks to eliminate the dangers. More of a difficulty than custom, however, is the absence of persistent effort. China has many monuments which commemorate initial zeal, followed by a faltering by the wayside, and an eventual collapse or precipitate flight. There is need for a deep realization of the people's backwardness in handling sanitary matters, and a determination to continue in the effort to construct for them a system on which their national physical well-being may be firmly established. China's wealth is, as yet, largely potential and underground. The vast majority of the population lives from hand to mouth, and human life is held in such slight esteem that little effort is made to conserve it. It follows, therefore, that very little public money, or even private wealth, can be counted on for safeguarding the health of the community.

Suppression.—Here are to be included all available methods for eradicating or alleviating hookworm disease. The recommendations with which Reed and Chow end their respective reports can be summed up in two words, education and isolation.

TABLE 4.—COMPARISON OF INCIDENCE OF HOOKWORM AND OTHER WORMS

City	Number Examined	Ascaris Infections		Trichocephalus		Hookworm	
		Number	Per Cent	Number	Per Cent	Number	Per Cent
Changsha	120	73	60.83	11	9.17	14	11.66
Changteh	739	No report	No report	No report	No report	113	15.29
Pinghsiang	272	172	63.24	20	7.35	222	81.62
Sinhwa	210	207	98.57	22	10.48	27	12.86
Totals 4 cities	1 341					376	28.04
Totals 3 cities	602	452	75.08	53	8.80		

---

5 Second Annual Report International Health Commission 1916.

(*a*) Education The order in which the education proceeds matters little, so long as we see to it that the mine operator or farm owner learns of the danger from hookworm both to his employee and to himself, and of the economic gain sure to follow its eradication, that foremen are taught adequate methods of oversight and are compelled to assume definite responsibility for sanitary conditions within assigned areas, and that the laborer himself, whether farm hand or miner, is plainly, directly and repeatedly shown how to avoid infection

But we may go further than Reed and Chow and insist that until practical sanitary instruction is introduced into all schools, little improvement can be expected Ordinary hygiene is being taught more commonly than heretofore, but this must be supplemented, especially in the agricultural and mining districts, by simple illustrated lectures and the distribution of literature about hookworm and other parasites and about the use of the latrine and proper disposal of its contents Medical colleges, too, must teach not merely physiology and therapeutics, they must reinforce their departments of preventive medicine, so that every student and graduate shall be an apostle of practical sanitation All possible encouragement must be given to the widespread organization of local bureaus of health, to be under the supervision of the department of police, as in Japan Nothing can educate either the public or the health officer as conclusively as complete vital statistics At present, no one in China knows what people die of or what the death rate is The bureaus of health must be educated to proceed without delay to supply these deficiencies There is scarcely a doubt that they will welcome every friendly suggestion from institutions or organizations whose aim is known to be of service In Changsha, for several years past, the staff physicians of the Yale Hospital have held appointment as counselors to the chief of the city bureau of health

The scientific worker should be so educated as to be able with the least possible loss of time to devise such a substitute or such a modification of the manure the farm hand now has access to as will remove from him the great source of his infection

(*b*) Isolation If no coolie were permitted to enter a mine until examined and pronounced free of hookworm, uncinariasis in mines would soon be a dead issue The same would be true of camps or any estate where communication could be controlled and infected persons isolated for treatment But for those vast areas of farmland to which nightsoil is brought without control, the problem will remain unsolved so long as the worker has to use for fertilizer feces that contain living ova

Substitution — Hookworm will disappear from China only when the method of substitution succeeds — substitution not of something else for human excrement as fertilizer, but of a nightsoil freed in some way of its danger, to take the place of one full of hookworm ova carried directly from the privy to the growing crop long before any process of *fermentation* has destroyed the ova therein The solution of this tremendous problem will be greatly accelerated as here and there throughout the land organized investigation can be made to determine, amid varying conditions of soil, temperature and meteorology, how to treat human excrement in order to eliminate the danger of infection for the worker who comes into dermal contact with it, at the same time preserving its value as fertilizer The mere statement of such a problem for a vast country like China, abounding in superstitions and devoted to the keeping up of traditional custom, is almost alarming And yet, at a time like this, when the traders of the West are extending their commercial interests throughout China for the sake of profit to the citizens of their respective lands, is there not a call for unselfish service as well? It is a call for funds and for workers to grapple with one of the world's big problems of sanitation And the local authorities will help Throughout the summer of 1916, while the survey was in progress in Sinhwa and another at Changteh, hookworm was a prominent topic of conversation at not a few official dinners, and government officials, from the highest down, when they learned of the danger of hookworm and of the economic gain likely to follow its suppression, gave assurance of their financial and moral support to any reasonable, practical measure The governor of Hunan, himself deeply interested in the whole campaign, offered to set aside a suitable tract of land for experimental purposes, and his example was followed by several wealthy landowners The government bureau of mines, and all others who have been approached, say frankly that they wish guidance in organizing and studying methods of hookworm control They wish their mines and properties cleared of hookworm, and will cooperate in bringing this about Such signs are full of hope They mean that, given such cooperation as the International Health Board has been able to extend to other countires, the local Chinese authorities will not be behind those of other nations in working both for the eradication of the hookworm menace and for a gradual reform of the entire system of sewage disposal, that is even more fundamental than the problem of mere hookworm infection

Hunan-Yale Medical School and Hospital

THE RELATION OF LOW BLOOD PRESSURE TO A FATAL TERMINATION IN TRAUMATIC SHOCK *

F H PIKE, Ph D
Associate Professor of Physiology, Columbia University, College of Physicians and Surgeons
AND
HELEN C. COOMBS, A M
Graduate Student in Physiology
NEW YORK

It is desirable, in view of the cooperation on the part of several of the physiologic laboratories of the United States in the work on the nature and treatment of traumatic shock arising from war conditions, that the results of such work be made public as early as possible in brief communications Such is our reason for the form of the present note

The experimental facts, in part unpublished and in part drawn from previous work, are as follows

1 When the cells of the brain and medulla oblongata are deprived of blood for a period of from ten to twenty minutes, a change in the staining reactions of the cells is demonstrable if the brain and upper portion of the spinal cord are removed some minutes after the circulation to the head has been restored[1]

2 There is a greater susceptibility of these previously damaged cells to strychnin Paralysis and fail-

---

* From the Department of Physiology, Columbia University

[1] Gomez and Pike Jour Exper Med, 1909, **11**, 257 265

ure of function from administration of strychnin during the resuscitation period occur more readily in the anterior (cephalic) portion of the central nervous system, which has been deprived of blood for a time, than in the posterior portion through which the circulation has been maintained continuously.[2]

3. Such damaged nerve cells will recover when a proper supply of oxygenated blood is provided. Respiration, blood pressure and pulse rate soon become normal.[2]

4. Transection of the spinal cord in the upper thoracic region may be done without fatal results some hours after the circulation to the brain has been restored. Transection of the spinal cord at this level in animals with brain intact is not ordinarily fatal.

5. Transection of the spinal cord is fatal if done soon after the reestablishment of the cerebral circulation, or if done soon after the return of the respiration and the blood pressure to their normal conditions. Death follows in from five minutes to an hour.[3]

6. Section of the spinal cord in the upper thoracic level lowers blood pressure. Increasing blood pressure by clamping or ligating the descending aorta just above the diaphragm will restore the failing encephalic (including bulbar) functions, if the increase is brought about soon enough.

7. In cases of severe damage to the cells of the central nervous system, no return of function, or only an extremely slow and imperfect return, is possible so long as the blood pressure remains low. The conditions may be improved by increasing the blood pressure artificially. The conditions become worse when a fall of blood pressure is brought about by some means which does not involve transection of the spinal cord.

It is true that the conditions produced in our animals do not, at first sight at least, coincide in all respects with the conditions as they are supposed to exist in traumatic shock in which the trauma does not involve the central nervous system directly, and the objection may at once be raised that conclusions drawn from such a series of experiments cannot be transferred without modification to apply to conditions in a traumatic shock. But whatever the other conditions in traumatic shock may be, we find strong evidence for the view that some physical damage within the central nervous system must be included as one of them. Such damage may or may not be demonstrable histologically, but a considerable personal experience with conditions in which low blood pressure and diminished blood supply to certain regions of the body, added to the experimental facts contained in an extensive literature on these subjects, have led us to the conclusion that neither low blood pressure of the magnitudes recorded in cases of surgical or traumatic shock, nor the diminished supply of blood to the brain is sufficient in itself to produce such speedy death as is often reported in surgical or traumatic shock. What the nature of this injury to the central nervous system is we shall not now attempt to say. Porter's[4] views on fat embolism as the cause of surgical or traumatic shock are suggestive in this connection. The profound shock sometimes seen in caisson disease, in which air embolism is a common occurrence, is in line with Porter's observations.

There is no question in our minds that the general systemic blood pressure of mammals is higher than is strictly necessary for the maintenance of the life of uninjured cells. But injured cells require a better blood supply for their restoration than uninjured cells do for mere maintenance. There is, then, a possibility of a factor of safety in the blood pressure in the organism in health. There is a sufficient margin of safety to restore injured cells to a condition approaching normal if the injury has not been too great.

The general conclusion which we have reached as the result of a consideration of all the conditions known to us is that the general conditions of resuscitation apply also in surgical or traumatic shock. Some means of raising the systemic blood pressure is necessary in the treatment of surgical shock. The laboratory worker has several such means at his disposal, but none of them are susceptible of easy and successful clinical application. Experiments looking toward the development of some method of raising blood pressure which will be susceptible of clinical application are now in progress.

A TYPHOID CARRIER PROBLEM

H. F. SENFTNER, M.D., Dr.P.H.
Assistant Epidemiologist, Bureau of Communicable Diseases, California State Board of Health
BERKELEY, CALIF.

In the first week of April, 1917, I was delegated to investigate an intermittent outbreak of typhoid fever in Bakersfield, Kern County, Calif. The records of the health department of that city showed that for a twelvemonth, beginning June, 1916, cases of typhoid fever had appeared scattered over the city, both sexes had been attacked, and the age range had been from 3 to 46 years. That the outbreak was intermittent was evidenced by the total absence of typhoid in the city during September, October, November and December, 1916. In all, there had occurred twenty-two cases, with a mortality of 9 per cent.

The municipal water supply had been examined from time to time by the state bureau of sanitary engineering, and the typhoid incidence could not be connected with it. The matter of shellfish and of ice cream was also investigated with negative findings. Suspicion was therefore naturally directed toward the milk supply of the city.

There were twenty-five dairies supplying the people of Bakersfield, not including numerous producers who owned one or at most two cows and supplied their own family and the families of neighbors in their immediate vicinity. Furthermore, during the twelvemonth, the families in which one or more cases of typhoid had developed had, like other families in the city, repeatedly changed from one dairy to another or even to a neighbor's supply, when purchasing milk for domestic consumption. To ascertain definitely the name of the dairyman who had been supplying a family during the incubative period of the typhoid illness in that family was, therefore, an exceedingly difficult task.

Much direct and cross examination of members of the families in which typhoid had occurred brought forth a mass of confusing and conflicting evidence. This evidence was carefully weighed, and all irrelevant and extremely doubtful data ruled out by the investigator. The result left nine dairies under suspicion. These nine dairies were then investigated, and the result left three dairies still under suspicion. The evidence thus far gained, when taken in conjunction with the case report, showed that from June to September,

---

[2] Stewart et al.: Jour. Exper. Med., 1906, 8, 309-310.
[3] Pike: Am. Jour. Physiol., 1912, 30, 436-450.
[4] Porter: Boston Med. and Surg. Jour., 1917, 176, 248.

[5] Pike, Guthrie and Stewart: Jour. Exper. Med., 1908, 10, 417-418.

1916, all cases of typhoid in Bakersfield directed suspicion to Partnership Dairy A + B as their source of infection At this time, however, an incident occurred in the ordinary pursuit of business which, had it not occurred, would have greatly simplified the typhoid problem On or about Sept 1, 1916, the partnership was voluntarily and amicably dissolved Dairyman A returned to his original sources of supply, and Dairyman B to his Dairy C did not come under suspicion until February 1 of the following year

Following the dissolution of the partnership of A and B, the city remained totally free from typhoid until January, 1917, when five new cases appeared in the city, all directing suspicion to Dairy B Both Dairy A and Dairy C had continued operating independently all this time without the occurrence of typhoid among their respective customers What was the natural inference to be drawn from the situation as it now stood? That in Dairy B probably lay the source of all the typhoid infection to date This inference was based on the record of typhoid in the city when Dairy B was operating in partnership with Dairy A, and with the record of typhoid in the city when Dairy B was operating alone

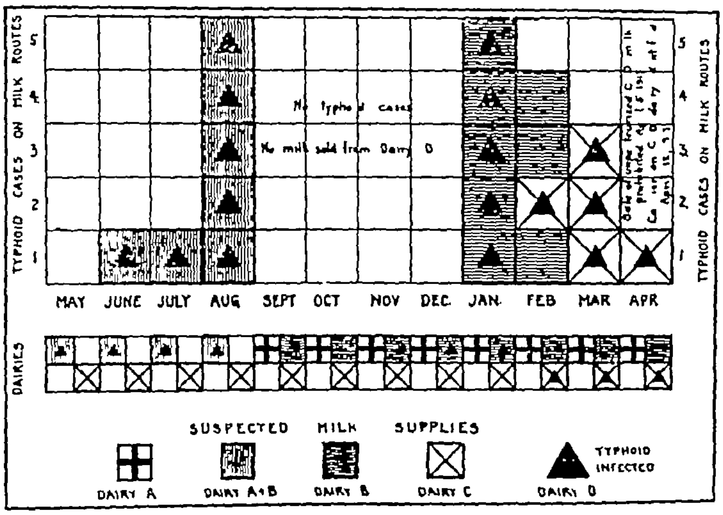


Chart showing by months the number of typhoid cases, the typhoid infected dairies, and the sale of suspected milk Dairy A+B was infected by D during May, June, July and August, as shown by the symbol for D inscribed within the symbol for Dairy A+B There was no further sale of D milk until mid December, as shown by the absence of the symbol for D until that time Thereafter the symbol for D, inscribed within the symbols for Dairies B and C, respectively, show typhoid contamination of the milk of those dairies by the D supply It will also be noted that wherever the symbol D is not inscribed within a dairy symbol, the milk from that dairy remained uniformly free from typhoid

The next step in solving the problem was an investigation of Dairy B Its dairy farm was inspected, its water supply examined and found unsafe for domestic use, and Widal and feces tests were made of all persons connected with the dairy All proved negative, however, save that in the stool of the owner an organism was obtained giving typical typhoid reactions on all mediums but not agglutinating with typhoid serum (Parke, Davis and State Hygienic Polyvalent), a gram-negative bacillus, slightly shorter than the typhoid bacillus

This necessarily was open to suspicion, and yet, on the other hand, no one in or about the dairy farm had been ill with typhoid, although the owner, his wife and three young children, as well as two dairy workers, had used and still were using the local well water supply and raw milk for domestic use None in this group had ever had typhoid fever, nor had any received antityphoid vaccination

The situation remained unaltered Our inference that Dairy B was the source of typhoid infection had not been substantiated by the evidence thus far in hand Some factor mysteriously entered into and then made its sudden exit from the situation For some as yet unrevealed reason this factor had apparently lain dormant from mid-August to mid-December, if the typhoid incubative period is remembered in connection with the incidence of cases in the city

The books of Dairy B were again searched for the missing link of ineffectivity, but without result Every consideration was shown by the proprietors, every possible aid rendered, but we were unwittingly baffled in our efforts to arrive at a reasonable solution of the problem in hand

The month of February, 1917, started on its typhoid career with the appearance of a case on the 12th ascribed to Dairy B On the 15th, 21st and 26th, respectively, three more cases of typhoid occurred Those of the 21st and 26th were ascribed to Dairy B, but that of the 15th was ascribed to one of two sources (1) Dairy C, which had had a typhoid-free record for at least the four previous years, and (2) another dairy, which I shall call E The local health authorities had been tireless in their efforts to get at the source of the outbreak without avail They had erred, however, in setting down the case of February 15 as having had its source in Dairy B, hence when in March there occurred three more cases in the city they also counted them as against Dairy B

An investigation by the state's agent in April resulted in a concurrence of opinion that the cases whose dates of onset had been, respectively, February 15, March 1, 5 and 9 and also that of April 4, 1917, were rather to be ascribed to Dairy C, which up to that time, however, had had no typhoid among its customers for at least four years previously What now was the situation? The first cases had occurred among the customers of Partnership Dairy A + B Following dissolution of this partnership, there had been no further incidence of typhoid in the city for four months—then typhoid occurred solely among the customers of Dairy B, and in March and April not among the customers of either Dairy A or Dairy B but in Dairy C The presence of a typhoid carrier could therefore be reasonably assumed The inference could readily be made that this carrier had been migratory—that he or she may first have been employed in Dairy A + B, then have left the city or have been out of employment or have made a change in occupation for five months, and thereafter have obtained employment in Dairy B and now in Dairy C The inference of five months' absence from the city or unemployment or change of employment by the carrier was in line with the absence of typhoid in the city during September, October, November and December

The situation had now resolved itself to a detection of a carrier in Dairy C The migratory habits of dairy employees were well known Such data as could be obtained relative to dairy employees in connection with the dairies under suspicion was found sadly lacking in many of the most important details

It was ascertained that Dairy C was located at a little distance from the city, and inquiry was therefore made of the county health officer as to the incidence of typhoid at the dairy and within a 10 mile radius of the city He stated that no recent typhoid had been reported within this area

Dairy C was next visited, and after a conference with the proprietor and his family a clue to the probable missing link of infectivity was found, and as later laboratory tests showed, the carrier was definitely established A situation in the city which had proved replete with complex factors had at last been relieved It was found that the source of the series of typhoid cases which had occurred in the city between June, 1916, and April 4, 1917, was the milk supply of a small producer, D, who had intermittently sold bottled milk to the various other dairies from April, 1916, to Feb 1, 1917, at which later time he had purchased the entire interests of Dairy C, and had merged its milk supply with that of his own cows and had continued to operate under the name of Dairy C The evidence in support of this is as follows

1 From April, 1916, to mid-August 1916, D had sold all his milk to the Partnership Dairy A + B, with the result that all typhoid cases which occurred during that period were among Dairy A + B customers

2 D did not produce or sell any milk from mid-August to mid-December, 1916 No typhoid cases occurred in the city during September, October, November and December

3 D again sold to Dairy B intermittently from mid-December to Feb 1, 1917, and typhoid cases occurred in the city intermittently as to time of onset and all among Dairy B customers

4 Dairy C had maintained a typhoid-free record for at least four years among its customers previous to being bought up, Feb 1, 1917, and merged and operated by D under the name Dairy C," when new cases of typhoid arising in the city could be definitely ascribed to it.

5 The family of D gave a positive history of past typhoid infection Mr D had had typhoid forty-eight years before, and once since that time Mrs D had had typhoid twenty-eight years before, and once since that time One son and one daughter, now married and living in distant parts of the state, had had typhoid several years before Mrs D's father, brother and nephew had died of typhoid

6 The milk supplied by D was bottled at his dairy farm by himself, his wife and three daughters (the three daughters have never had typhoid) It was said that prior to Feb 1, 1917, D had never had a milk route, and it was not known to the health authorities that he was producing milk for public consumption

7 The state hygienic laboratory reported, April 12, 1917, that the feces specimen from Mrs D had proved positive, morphologically, culturally and serologically, for typhoid bacilli. This proved Mrs D a typhoid carrier

CONCLUSIONS

The lessons to be derived from this investigation are

Although all the milk suspected in connection with this outbreak was Grade A unpasteurized milk, it was not a safe milk, as the evidence clearly shows

To insure safety, two measures already adopted by some municipalities are imperative the licensing of persons who are connected in any manner with the handling of public or private milk supplies only after thorough and repeated blood and feces tests to exclude the typhoid carrier, and the penalizing of any person who shall violate such ordinance

Still another lesson, and this more especially for the laity, is that before investing means and time in the establishment of a dairy farm and dairy route, it would be well first to ascertain one's qualifications from the standpoint of health in connection therewith or face a possible alternative of being declared a typhoid carrier by legal authority and having to sell out at a loss, because of inability to engage further in the production or handling of milk and its products

Then again, there is the lesson for the community that it so support its local health department financially as well as legally that ample time may be devoted to the recording of all necessary data in relation to dairy and milk inspection and the compilation of all sources and changes in the milk supply of the city

The importance of making an immediate memorandum of the family supply of milk by the attending physician in any suspected case of typhoid is also to be emphasized

CONVENIENT DEVICES FOR MELTING PARAFFIN FOR BURNS*

TORALD SOLLMANN, M D

CLEVELAND

One of the main drawbacks in the paraffin method is the inconvenience of melting the paraffin and keeping it melted at the proper temperature, between 55 and 60 C This is almost impossible by direct heat, since this would tend to overheat, and would also cool too rapidly The device ordinarily used is a double boiler (cereal boiler) This answers, but is far from ideal For simple dressings, as in office practice, it is inconvenient With extensive dressings, as in shop practice, there is the further difficulty that the paraffin will either overheat or cool unduly while the attention of the surgeon is centered on the patient The temperature could, of course, be kept constant by the ordinary scientific thermostats, but these are not practical, since they are too cumbersome, are immovable and are easily injured Under the stress of war practice, the difficulties must be still greater

I have experimented with two devices which are simple and appear practical an electrical "food warmer" for office use, and an "acetate thermostat" for shop and field practice

1 Food Warmer This is the pint size sold in the stores for the warming of babies' milk bottles When filled one half or two thirds with paraffin of melting point, 47 5 C, it can be used in three minutes after the current is turned on If the current is then turned off for two minutes, it will have just the right temperature It will remain usably melted for ten minutes without current, when a crust begins to form, it can then be again made usable by turning on the current for a few moments

This should be particularly useful when the paraffin is used only occasionally, as in ordinary office practice

Table 1 gives the data of an actual experiment

2 Acetate Thermostat Sodium acetate has the curious property of melting and congealing at just about the temperature that is needed for the application of the paraffin[1] It retains this temperature constant for a long time while passing from the liquid to

---

* From the Pharmacological Laboratory of Western Reserve University School of Medicine

* Research partly supported by a grant from the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association

[1] This property was brought to my attention by a report of the Chemical Laboratory of the American Medical Association (Annual Reports of the Chemical Laboratory of the American Medical Association 9, 105) on sodium acetate in warming bottles.

the solid state For instance, some sodium acetate melted in a crucible remained at the temperature of 58 C for an hour and ten minutes without the application of further heat

TABLE 1—PARAFFIN IN FOOD WARMER

Current	Temperature of the Paraffin (Degrees C)	Remarks
On for 3 min	65 5	Nearly completely melted, except a crust around the margin, center usable, but rather hot
Current turned off		
3 min	58 5	
9 min	50	Still usable
20 min	48	Pellicle of solid paraffin
36 min	47 5	Not usable, mostly solid
Current turned on		
2 min	66 5	Mostly melted, usable, but hot
Current turned off		
13 min	48	Pellicle, just usable

This is shown by the following data

Two nickel crucibles of the same size were filled, the one with 40 c c of water, the other with sodium acetate They were heated to 68 5 C The heat was then withdrawn, and the temperature noted from time to time as cooling proceeded (Table 2)

TABLE 2—COOLING OF SODIUM ACETATE

Time (Minutes) After Removal of the Heat	Temperature of Sodium Acetate (Degrees C)	Temperature of Water (Degrees C)
1	66 8	66 5
6	61	54 5
10½	56 5	48 5
13	56 5	45
15	57 8	
17	58	41 5
21	58	37 5
26	58	31 5
60	58	26 5
75	57	25
90	51 (solid)	24

When sodium acetate is used to fill a pot surrounding a vessel containing paraffin, it keeps the paraffin melted at just the right temperature for application for three hours after the pot has been removed from the fire If in the meantime it has been set into a fireless cooker, the time could of course have been further prolonged

The advantages of this will be appreciated at once the paraffin needs no further attention after it has been melted, until three hours afterward, and then it can be quickly reheated The paraffin pot can be carried to any part of the shop, or in an ambulance to the dressing station The sodium acetate is syrupy, and does not easily spill, it does not evaporate, so that no attention is required in this direction, indeed, the outer and inner vessels could probably be joined by solder

TABLE 3—PARAFFIN IN ACETATE THERMOSTAT

The pot was removed from the fire at 10 20 a m and set on the table

Time After Removal from Fire	Temperature of the Melted Paraffin (Degrees C)	Remarks
6 minutes	59	Ideal for use
16 minutes	58	
28 minutes	55	
45 minutes	54 5	
2 hours	53 5	
2 hours, 45 minutes	50	Faint film, usable
3 hours	48 5	Continuous film, just usable
3 hours, 15 minutes	48	Partly liquid, but not usable
4 hours	47 5	Mostly solid, not usable

The device that I am using, which appears especially practical, consists of an ordinary glue pot of size O The outer pot is filled two thirds with official sodium acetate (requiring probably something over a pound) The inner vessel holds about a pound of paraffin

In Table 3 are the data of an experiment, showing the rate of cooling

Clinical Notes, Suggestions, and New Instruments

ACUTE DIABETES WITH ENORMOUS ELIMINATION OF NITROGEN REPORT OF CASE WITH AT LEAST TEMPORARY RECOVERY*

Leon Jonas, M D,† and O H Perry Pepper, M D, Philadelphia

This case, first, is an excellent example of a certain type of acute diabetes which has received inadequate attention in the literature, secondly, it is of considerable interest on account of the almost unprecedented elimination of nitrogen during the early and fasting days after admission, thirdly, the high figures of ketone elimination deserve mention and emphasize the fallacy of basing prognosis solely on the degree of elimination, and finally, the dietetic and therapeutic measures pursued with prompt success are worthy of brief comment

REPORT OF CASE

History—S W, man, aged 21, Jew, was admitted to the medical division of the University Hospital, Jan 7, 1917 He stated that until four weeks before he had been in perfect health Acute superficial pain then developed along the left costal margin, resembling needles being stuck into the skin Shortly after the onset of the pains, he developed tremendous thirst and also began to lose weight He stated that he had lost 18 pounds in the four weeks Polyuria and frequency of urination developed, and the patient also complained of some slight cough and dyspnea He had never been ill before

Previous to this illness he drank about five glasses of beer a day Otherwise his habits and occupation are of no importance It was difficult to elicit this history, and no further information concerning the onset of his condition could be obtained

Examination—The patient was slender, with wasted musculature and a dry skin He was markedly somnolent There was a strong "acetone" odor to the breath Thoracic and abdominal examinations were negative The blood pressure was systolic, 100, diastolic, 60 Urinanalysis revealed the urine a corn color, a light flocculent sediment, specific gravity, 1 035, acid, a trace of albumin, sugar present, acetone and diacetic acid present, no bilirubin or urobilin Microscopic examination revealed light and dark granular casts, occasional leukocytes, and calcium oxalate crystals Blood count revealed hemoglobin, 100 per cent, erythrocytes, 5,100,000, leukocytes, 26,400, differential count polymorphonuclear neutrophils, 88 per cent, small lymphocytes, 6 per cent, large mononuclears, 1 per cent, transitionals, 5 per cent

The patient was admitted in the afternoon and received no food after 11 a m The next morning he was placed on whisky, coffee and sodium bicarbonate, receiving 56 gm of soda on this day He was still somnolent, and the breathing was somewhat deep and slow

Treatment and Results—January 9, the patient was not improved The report from the laboratory, as indicated in the table, revealed the severity of the condition The patient was kept on the same diet and given 87 gm of soda, of which 30 gm were given intravenously The plasma carbon dioxid reading was 49 volumes per cent

January 10 The patient's condition was worse The laboratory reports showed no improvement The diet was increased by the addition of skimmed milk and oatmeal Sixty gm of sodium bicarbonate were given

January 11 The condition was about the same The patient still showed slight hyperpnea, and was somnolent The diet was slightly increased, and 75 gm of glucose were given Intravenous injection of 1 liter of a 3 per cent sodium bicarbonate solution was given The blood urea nitrogen was 13 mg per hundred c c, blood plasma chlorids 5 02 gm per liter, and blood plasma carbon dioxid content 43 volumes per cent

---

*From the Medical Division of the Hospital and the William Pepper Laboratory of the University of Pennsylvania

† Woodward Fellow in Physiological Chemistry

January 12 The patient was better and brighter No improvement was shown by the laboratory report over the specimen of the preceding day The carbohydrate of the diet was increased, and the soda continued

January 13 There was marked improvement Soda was continued

January 14 The patient felt better The report from the laboratory showed improvement

January 15 The urine was alkaline for the first time The plasma carbon dioxid reading was 70 volumes per cent The Wassermann test was negative.

January 19 There was great improvement The carbohydrate of the diet was gradually reduced, and proteins and fats were increased The white blood cells numbered 12 900 On this date, edema of the face was noted, and there was also noted a marked increase in weight This edema was probably a "soda edema" and it disappeared rapidly on reduction of the amount of sodium bicarbonate administered.

January 24 The urine was sugar-free for the first time From this time on the patient continued sugar-free with an increasing tolerance for carbohydrate On discharge, four weeks later, his tolerance permitted the addition of 40 gm of bread, 50 gm of potato and 100 gm. of oatmeal to the diet without the appearance of sugar in the urine

Since discharge he has been under observation in the outpatient department and has continued to be sugar-free and is gaining weight His most recent observation was March 19

LABORATORY DATA

Date 1917	Intake			Analysis of Urine					Blood Carbon Dioxid Volume per Cent.	Weight Kg
	Carbohydrate Gm	Nitrogen Gm	Sodium Bicarbonate Gm	Amount C c	Reaction	Nitrogen Gm	Glucose Gm	Beta Oxybutyric Acid Gm		
January 8-9	0	0	43	4 740	Acid	35.5	80.8	69.8		51
January 9-10	0	0	87	5,170	Acid	32.0	40 0	83.0	49	
January 10-11	35 0	1.9	60	5,515	Acid	38 5	91 4	82.8		
January 11-12	163.5	6 6	60	6 050	Acid	32.3	182.0	85.0	43	
January 12-13	180 0	4.5	60	6 6 0	Acid	35 5	308 0	85.6		47 4
January 13-14	200 0	11.2	60	6,120	Acid	31.3	330 1	76 0		
January 14-15	195 0	8.6	60	3,940	Acid	25 0	182.0	48.1		
January 15-16	200.0	8.3	60	3,570	Alkaline	18.9	178.2	34 7	70	49.5
January 16-17	200.0	9 4	60	3 020	Alkaline	15.8	143.0	22.2		
January 17-18	184 0	9 4	60	3,550	Alkaline	13.2	165 0	8.5		
January 18-19	186 0	9 7	30	3 770	Alkaline	17 6	139 4	4 0		52.2
January 19-20	148.0	10.3	20	3 990	Alkaline	14 1	223 0	5.8		
January 21-22	80 0	14 2	20	3 710	Alkaline	14.8	17 6	4 0		
January 22-23	76.0	9 1	20	3 630	Alkaline	17 2	17 2	2.7		46.8
January 23-24	0	0	20	1 120	Alkaline	8.5	0	0.8		

COMMENT

Although the history in this case is indefinite as regards the condition at and preceding the onset of the diabetes, yet there is some suggestion that the early symptoms were due to some acute infection This is made more probable by the similarity between this case and other cases of acute diabetes following acute infection which have been observed Such cases usually occur in young persons who have recently been subject to some rather severe acute infection, for example, one of our cases followed scarlet fever and erysipelas The diabetic symptoms may appear with considerable suddenness, and are rapidly followed by great loss of weight and the symptoms of increasing acidosis When seen at this stage, the high figures of elimination of nitrogen and of ketonic acids and the general appearance of the patient are apt to lead to a poor prognosis Further studies, such as the estimation of the carbon dioxid tension of the alveolar air or carbon dioxid content of the blood, however, may show that the degree of acidosis is not so great as the figures of eliminated ketones might suggest, and the results of proper treatment indicate that the prognosis in such cases is better than it might at first glance appear Under careful treatment, the carbohydrate tolerance is recovered with surprising rapidity and completeness and the further return to a more or less normal condition is uneventful

Elimination of Nitrogen—For the six days after admission, the patient daily eliminated over 31 gm of nitrogen the daily average for the six days being 34 8 gm During this period, the intake as shown in the table was low in nitrogen (24 16 gm) and the nitrogen loss was therefore extremely great In the similar case reported by Geyelin and Du Bois,[1] the loss of nitrogen by an acute diabetic, at first on starvation and for eight days after on a moderate nitrogen intake, was enormous (over 281 gm for the eleven days) They assert that their figures are the highest yet reported for nitrogen elimination under these conditions Our patient had a higher output for the first six days after admission, and on a fasting treatment his nitrogen loss was even greater than in their case at a corresponding time This loss of nitrogen represents roughly a loss of about 2½ pounds of flesh per day, if it is assumed that all of the nitrogen came from that source So far as we know, the figures here reported for this short period are, at least, as high as any on record

A similar but less prolonged elimination of large quantities of nitrogen has been observed for a few days after admission in a number of our diabetic patients who had been on excessive protein diet before admission The elimination in such cases continues but a brief period, is not accompanied by loss of weight and has never been as high as in the present instance

Elimination of Ketonic Acids—The figures for the elimination of ketone bodies in this case are high and closely approach those of the case reported by Geyelin and Du Bois The highest twenty-four hour elimination in our case was 85 6 gm of beta-oxybutyric acid, while the highest output of ketones in the case reported by Geyelin and Du Bois is 87 gm of beta oxybutyric acid

This degree of elimination is much greater than that seen in many cases which rapidly progress into fatal coma despite our best therapeutic efforts

Treatment—This case well exemplifies the value of flexibility in treatment, for no arbitrary outline of treatment can be rigidly applied in every case In this instance, improvement seemed to commence with the change from a strict starvation treatment to the daily administration of moderate quantities of carbohydrate, and this method was continued until there was a distinct improvement in the acidosis At the same time, large amounts of sodium bicarbonate were given both by mouth and intravenously

Once improvement had appeared and the elimination of ketones had somewhat diminished, the carbohydrate of the diet was gradually replaced with protein and fat until the diet became practically our routine carbohydrate-free diet. During this period the urine had become sugar-free and all evidences of acidosis had disappeared.

After the patient had been sugar-free for a short time, carbohydrates were again tentatively added to his diet in small amounts without causing the appearance of the glycosuria The degree of tolerance exhibited was marked, and on discharge, the patient was receiving such considerable amounts of carbohydrate without glycosuria as to suggest that his tolerance had been restored about to normal The blood sugar had returned to a normal figure (0 07 per cent.) before discharge.

---

[1] Geyelin H R and Du Bois, E F A Case of Diabetes of Maximum Severity with Marked Improvement, The Journal A. M. A, May 13 1916 p 1532

A CASE OF TUMOR OF CAROTID BODY

George F Cahill, M D, and Richard M Taylor, M D, New York
Adjunct Surgeon, Bellevue Hospital, Instructor in Urology, New York Post Graduate Medical School and Hospital—Professor of Pathology, New York Post Graduate Medical School and Hospital

Tumors of the carotid body are of sufficient rarity to make it seem worth while to report their occurrence Shipley and Lynn,[1] in May, 1916, tabulated all the reported cases up to that time, numbering sixty-five, and added their case to those previously reported The growths and their pathology was thoroughly discussed by Callison and MacKenty in 1911 We wish to add another case to this group of rather interesting tumors

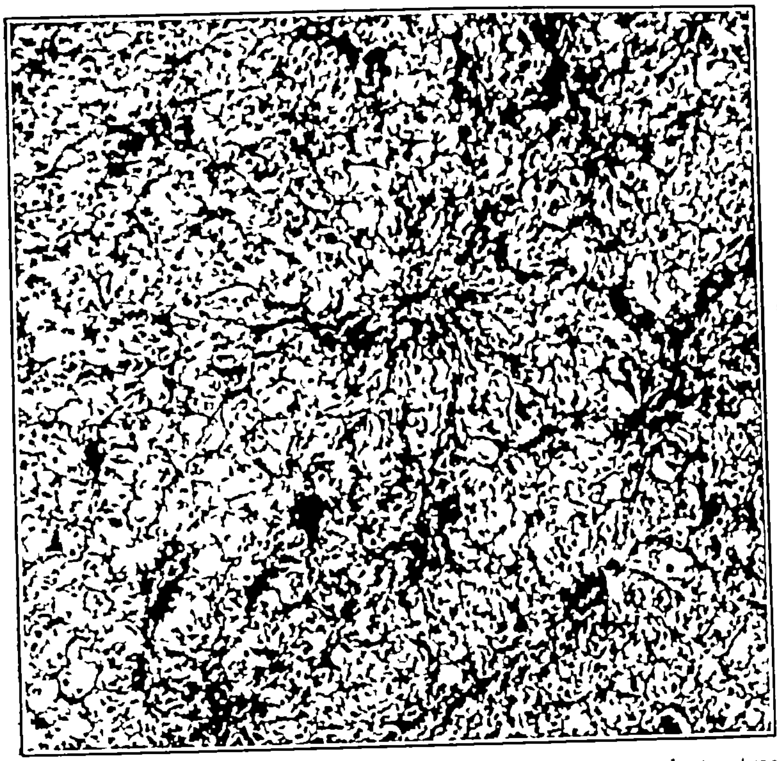


Fig 1—Low power photomicrograph showing the general structure of the growth, × 65

History—A M, Jewess, aged 51, born in Russia, was admitted to the Post-Graduate Hospital, Dec 6, 1915, with the diagnosis of fibromyoma of the uterus and tumor of the right side of the neck She stated that she had had a mass in the right side of her neck for at least eight years, and that up to a year ago it had not changed in size, but that since then it had enlarged slowly It caused her no pain, no difficulty in deglutition, and except for the presence of the mass, no signs or symptoms

The patient was a stout, healthy-looking woman, with a firm, deep-seated mass on the right side of her neck, at about the level of the hyoid bone, and presenting just anterior to the border of the sternomastoid muscle It felt lobulated, and was not movable to any degree There were no signs of any involvement of the adjacent nerves A definite diagnosis was not made

Dec 7, 1916, hysterectomy and appendectomy were done by Dr Herman J Boldt, and immediately following, at his request, the tumor of the neck was removed by Dr Cahill A curved collar incision was made in one of the wrinkles of the neck, for the woman was quite stout, and the tumor was exposed It was found to be very vascular, reddish like thyroid, and quite firmly attached to the deeper structures An attempt was made to deliver the tumor, but this was found impossible On careful dissection, it was found that the internal jugular vein ran into the mass and seemed to be incorporated with it The jugular vein was ligated above and below the tumor It was then possible to dissect the tumor free from the common carotid It was located between the external and internal carotids, extending down into the bifurcation crotch, where it received a large arterial branch After the ligation of this branch, the tumor was removed. Just below the tumor was a small round mass resembling a lymph node, which was also removed On account of the close relation of the tumor to the hypoglossal nerve, the nerve was considerably stretched in the removal The oozing of blood, until the tumor was removed, was very free The wound was closed with a small tissue drain

The patient was in fair condition and made a rapid recovery Immediately following the operation, she had unilateral paralysis of the tongue and some difficulty in swallowing, but this proved to be only temporary She was discharged from the hospital, December 24, the wound having completely healed Unfortunately the patient was lost track of, and all attempts to locate her have failed, so that no subsequent history is available The specimen was sent to Dr Richard M Taylor, who reported as follows

Pathologist's Report—The specimen consists of two pieces First A lobulated, light red, roughly rounded mass, measuring 4 cm in diameter and weighing 30 gm The surface is fairly smooth and it appears to be completely encapsulated The consistency is moderately firm On section, it is uniformly light pink throughout, except for a few small dark red areas scattered here and there The cut surface is smooth and regular, but on close inspection it is observed to be divided into numerous irregular lobules by fine trabeculae The capsule is very delicate, but intact Second A small dark red almond-shaped mass, measuring 3 5 by 1 5 cm. by 1 5 cm, and having the usual appearance of a lymph node

Microscopic The growth is surrounded by a thin but complete fibrous capsule, from which delicate interlacing trabeculae extend inward These fibrous trabeculae serve the double purpose of carrying the blood vessels and acting as a support to the tumor cells The primary blood vessels are quite large, and the walls are well formed by both connective and smooth muscle tissue The large vessels soon branch and finally break up into a fine capillary network. The principal cell of the growth is a rather large cuboidal or polyhedral cell with a relatively small and deeply staining centrally located nucleus, in which a nucleolus can usually be recognized The cytoplasm is relatively abundant, stains rather indifferently with eosin, and has a homogeneous or finely granular structure, but frequently contains small vacuoles In some instances, one sytoplastic mass seems to contain several nuclei This may be only an apparent fusion

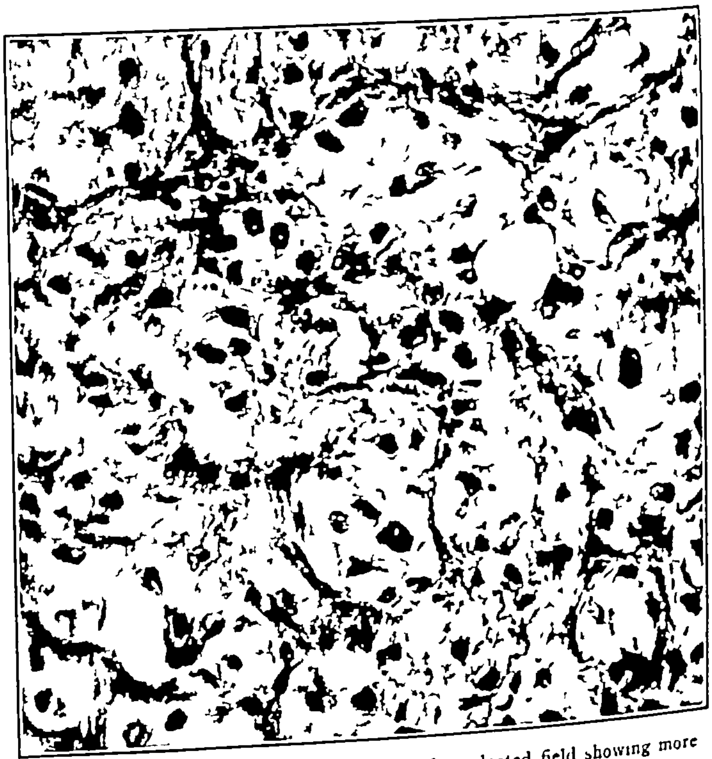


Fig 2—A higher power magnification of a selected field showing more intimately the character of the cells, × 300 diameters

but it is quite suggestive of a giant-cell formation. The cells are regularly disposed on a fine interlacing honeycomb-like stroma which also contains the capillaries. The cells, therefore, come into intimate contact with the blood stream, and are well and systematically supplied with nourishment. This very intimate relation and frequently poor differentiation between the cells of the blood vessel walls and the tumor cells is suggestive of an endothelial origin but the general appearance of the growth is certainly quite different from the usual forms of endotheliomas. While there is a marked departure from normal there is a distinct resemblance of the growth to the normal structure of a carotid body, and its origin from this organ seems to us quite certain. The growth probably bears a closer resemblance to some of the thyroid carcinomas than to any other form of tumor but in some respects there is also an analogy to the suprarenal tumors, both in the character of the cells and in the arrangement. The suprarenal tumors, however, have a greater tendency to form solid tubules or cords of cells while in this tumor the cells are arranged more in small lobules or at least very irregular columns. No mitotic dividing forms were recognized and, judging from the general arrangement of the cells and their relation to the stroma and the intact capsule it would be inferred that the proliferation is slow and that the tumor is relatively benign and not prone to give rise to metastasis. The examination of the neighboring and somewhat enlarged lymph node reveals only a mild chronic inflammatory process.

---

[1] Shipley, A M, and Lynn, F S Carotid Tumor and Aneurysm of the Internal Carotid, The Journal A M A, May 20, 1916, p 1602

2 Callison, J C, and MacKenty, J E Ann Surg, 1911, 58, 721

Diagnosis. Tumor of carotid body.

ADENOCARCINOMA OF THE BREAST OCCURRING IN A BOY OF THIRTEEN

R. R. Simmons, M.D., Columbia, Mo.
Instructor in Pathology, University of Missouri School of Medicine

Carcinoma of the breast in the male child is extremely rare. Some assert that it never occurs[1] while others merely mention it as "possibly occurring but very rarely." In light of the report of the case of carcinoma in the breast of a boy by Blodgett[2] it would seem unwarranted to affirm its non-occurrence. Blodgett's patient was a boy aged 12, and is the only case which I have been able to find in the literature in which a carcinoma occurred in the male breast at an earlier age than in the case which I am reporting.

REPORT OF CASE

History.—John S., aged 13, American, height 5 feet 5 inches, weight 127 pounds, well built, healthy and strong, had never had any serious illness, and was considered very hearty. His father and mother were both living and in good health. The grandfather on the father's side died of tuberculosis at the age of 40, the grandmother on the father's side was living and in good health. Both the grandparents on the mother's side were living and in good health. There had been no history of malignant disease in any of the grandparents. One sister of the father of the patient died at the age of 35 with an adenocarcinoma of the uterus. All other relatives were well and strong and give no history of malignant disease.

About one year ago the patient was struck in the right breast with a baseball bat. The blow was light, and caused no immediate soreness. Soon after this violence the patient noticed after exertion a burning and stinging sensation in that breast. Five months before the patient was seen by the surgeon, swelling became noticeable and there was some tenderness. When seen by the surgeon, Jan. 25, 1917, the tumor was quite noticeable. At this time a tentative diagnosis of chronic mastitis was made, and the patient prepared for operation the following day.

Operation and Result.—Dr. J. F. Mackey, Odessa, Mo., performed a radical operation, removing the entire gland with the surrounding fatty tissue. The diseased tissue was approximately 8 cm. across and about 1.5 cm. thick in the center; toward the margins the tumor was thin. The axillary glands showed no enlargement.

The healing process was rapid. Three weeks after the operation the union was perfect and the scar firm. At this time no abnormality could be detected by inspection or by palpation. There was no enlargement of the axillary glands on the side on which the operation had been performed. The left breast was examined, Feb. 25, 1917, one month after the operation. It showed some enlargement both to inspection and to palpation. The axillary glands on that side were not enlarged. The examining surgeon believed a tumor present in this breast, but since the parents of the patient did not consent to an operation no diagnosis as to the nature of the tumor could be made with certainty.

Pathologic Report.—Microscopically there was a marked proliferation of the gland elements throughout the sections. The newly formed glands were very irregular in shape, and the epithelium was arranged in many layers. Some showed definite lumina, while in others the proliferation was so great that the lumen was entirely filled up with cancer cells. Many of the glandular structures showed an ingrowth of stroma dividing it up into many smaller divisions. There was a tendency toward the formation of grapelike clusters of these atypical glands. The ducts showed some reduplication in the layers of epithelium. The stroma was abundant but not highly cellular. The adipose tissue appeared normal except for some areas in which the cancer had grown into it. There was a tendency to degeneration of the cells which lay centrally in the atypical acini, but this had not progressed to a marked degree.

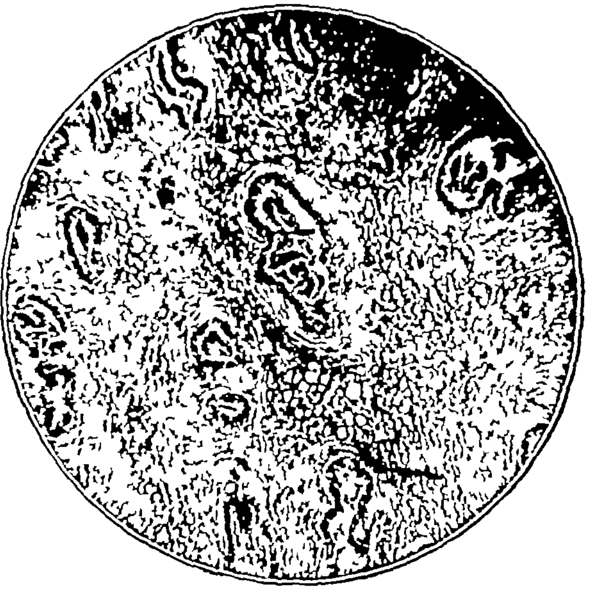


Fig. 1.—A portion of the tumor showing the atypical gland formation. There is a new formation of cancer acini within the preexisting gland acini. Low power magnification.

The pathologic diagnosis was adenocarcinoma of the breast, of the medullary type.

COMMENT

As stated, this case is largely of interest because of the infrequency of cancer in the breast of boys. Cancer of the male breast comprises only from 1 to 2 per cent. of all mammary neoplasms. Rodman[3] and Bryan[4] each put the figure at 1 per cent., Deaver and McFarland[5] at 1.5 per cent., and Schuchardt[4] places it at 2 per cent. While these figures indicate the relative infrequency of carcinoma in the male breast, they do not show the frequency of cancer in the *young* male No statistics have been found which give the relative frequency of mammary carcinoma in the male breast under 15 years of age, but this figure certainly must be very low A search of the literature has revealed but two authentic cases, that of Blodgett,[2] who reported a carcinoma in the breast of a boy, aged 12, and that of Bryan,[1] who reported a case in a boy, aged 14 years and 8 months In fact, cancer in the breasts of children under 15, regardless of sex, is very infrequent The cases of mammary carcinoma reported by Lyford, Carmichael, Cooper and Howe,[6] who reported cases at the ages of 8, 12, 13 and 15, respectively, must be considered of doubtful diagnosis, since in none of these cases was the diagnosis confirmed by microscopic examination of the tumor Thompson's[7] report is the only other one of a patient under 15 years of age which will bear critical examination He removed the tumor from the breast of a girl, aged 11 years, and submitted it to the pathologists of Bradford, England, for diagnosis It was reported as an adenocarcinoma Philip[8] collected reports of 300 cases of malignant tumors in childhood, but in this number there was none found in the breast of children under 15 years of age The present case, then, is unusual from the standpoints both of age and of sex

---

[1] "The first four quinquennia of life are completely exempt from malignant epithelial tumors of the mamma; at least I know of no well authenticated case that can be cited as having occurred within this period." (Williams, W. R.: The Natural History of Cancer, New York, William Wood & Co., 1908, p. 329.)

[2] Blodgett, A. N.: Cancer of the Breast in a Child, Boston Med. and Surg. Jour., 1897, **136**, 611.

[3] Rodman, W. L.: Diseases of the Breast, Philadelphia, P. Blakiston's Son & Co., 1908.

[4] Cited by Deaver and McFarland (Footnote 5).

[5] Deaver and McFarland: The Breast, Its Anomalies, Diseases and Treatment, Philadelphia, P. Blakiston's Son & Co., 1917.

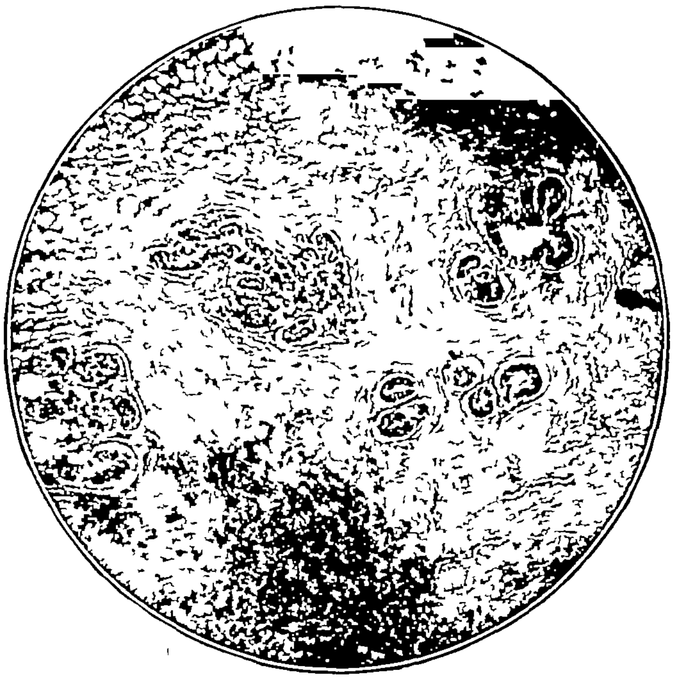


Fig 2—Another portion of the tumor The overgrowth of glandular elements is demonstrated The cancer acini show multiple lumen formation The ducts show an irregular overgrowth of epithelium Low power magnification

It is also of interest, in this case, to note that the trauma seems to stand in direct causative relation to the formation of the tumor Phelps[4] states that only 9 per cent of all writers since the middle of last century believe that transient injury might be a predisposing condition of malignant disease In this case, however, the tumor development did occur "within a reasonable length of time after the injury," and so in this case an etiologic relation might well be ascribed to the injury Furthermore, the fact that the tumor was actually noticeable by the patient himself seven months after the injury, together with the fact that even before the actual appearance of the tumor he complained of this stinging and burning sensation in the breast after exertion, would seem to substantiate such a view These incidents, however, while seemingly unquestionable in sequence, may have been a coincidence and bear no relation to the tumor formation One case is certainly not enough to prove such an assumption

Writers seem to agree that malignant tumors occurring in the young are apt to be of a rapidly growing type The examination of this tumor supports this view and emphasizes the importance of the early recognition of these cases of unusual carcinoma and their early and complete removal. The possibility of a neoplasm being carcinomatous should not be excluded because they are found in the breast of children, either male or female, until the true nature of the tumor is determined by microscopic examination.

---

6 Lyford, Carmichael, Cooper and Howe, cited by Rodman (Footnote 3)

7 Thompson Brit Med Jour, 1908, 2, 502

8 Philip Ztschr f Krebsforsch, 1907, 5, 326

REPORT OF A CASE OF CHLOROMA *

G B Kramer, M D, and T L Birnberg, M D, St Paul
Pathologist and Visiting Physician, respectively, City and County Hospital

History—A girl, aged 4, was brought from an orphanage to the City and County Hospital, Sept. 7, 1916, for the purpose of having her tonsils and adenoids removed One of the sisters in the orphanage had noticed that the child's eyes were getting larger and more prominent. An oculist who examined the child's eyes made little of the condition, and advised removal of the child's tonsils and adenoids, which was done

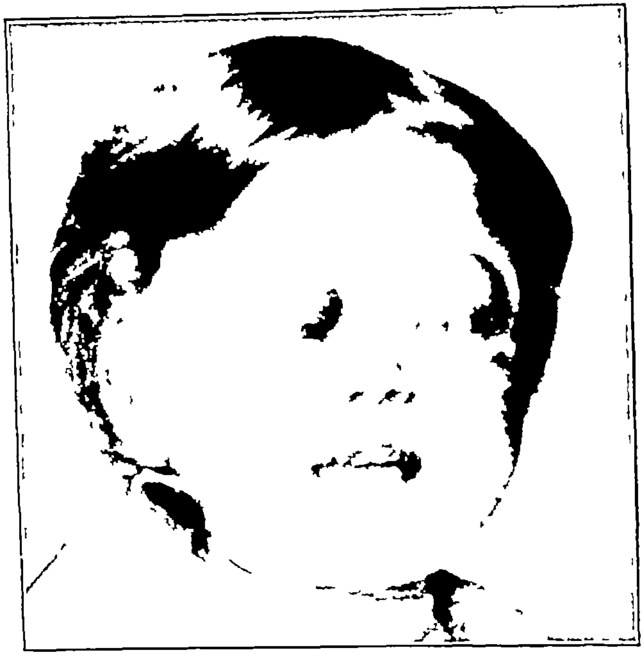
Several days after the operation, the child contracted chickenpox, from which she recovered several days later The physician in charge noticed that her eyes gradually became more prominent. For a time, it looked as though the exophthalmic condition was stationary, but later exophthalmos became more marked, the head became larger, and the nose became saddle-shaped Examination of the eyes revealed choked disk Exophthalmos of the eyes and enlargement of the head gradually increased, the glands of the neck and submaxillary glands became larger and hard, and the rami of the mandible of the jaw began to show more prominence All sutures of the head began to separate and, between the sutures, a boggy mass about 3 cm across was felt, the surface of which was smooth This mass was present between and all along the sutures of the cranial bone At that time one of us (T L B) saw the patient and diagnosed the condition as chloroma The temperature varied from 100 to 102 F The symptoms continued to become marked until death, which occurred, Nov 27, 1916 The child was greatly emaciated and anemic

Laboratory Findings—Examination of the urine revealed no albumin, the specific gravity was 1 028, the reaction was acid, and there were no casts The Wassermann test was negative A nasal smear revealed Friedländer bacilli and staphylococci Blood examination revealed erythrocytes, 1,200,000, white cells, 12,900, differential count polymorphonuclears, 68 per cent, lymphocytes, 16 per cent, large mononuclears, 6 per cent, transitionals, 30 per cent, eosinophils, 2 per cent. Two weeks later polymorphonuclears, 40 per cent., lymphocytes, 39 per cent., large mononuclears, 12 per cent, transitionals, 7 per cent., eosinophils, 2 per cent., basophils, 1 per cent Six days later polymorphonuclears, 25 per cent, lymphocytes, 26 per cent., large mononuclears, 30 per cent, transitionals, 7 per cent, eosinophils, 2 per cent, myelocytes, 5 per cent

Postmortem Findings—Necropsy was performed six hours after death The head was large and asymmetrical Both rami of the inferior maxilla were prominent, but the left was more prominent than the right On each side of the hard palate there was an olive-shaped body about 1 cm across The submaxillary glands were enlarged and hard The glands of the neck were enlarged and hard The eyes showed extreme exophthalmos The conjunctivae were edematous, the corneas slightly opaque The pupils were equal in size The veins of the neck were distended and prominent The sutures of the cranial bones were separated, and all along between the sutures there was a boggy mass, 2 cm across On the inner surface of the sternum there was yellowish-green tissue 5 mm in thickness All along the thoracic vertebrae there was a thick layer of greenish-yellow tissue There were several yellowish-green plaques on the pericardial wall On the heart, in the middle of the left ventricle, there was yellowish-green tissue which was 8 mm across and extended 3 mm into the ventricular wall On the lungs there were deposits of yellowish-green tissue, the distribution of which was irregular, the deposits varying in size from 3 to 5 mm across. On the surface of the liver and also on the cut surface there were greenish-yellow areas. On the cut surface these were generally found near and around the blood vessels. The pancreas all the way through was greenish yellow and harder than normal, on section the greenish-yellow also prevailed. The lobules were indistinct. The mesenteric glands were slightly enlarged. The surfaces of the kidneys were greenish-yellow, the color being irregularly distributed. On section the same color prevailed. The markings were indistinct. The cortex was slightly thickened. The ovaries and tubes were harder than normal and on section were greenish-yellow.

---

* From the Pathological Laboratory, City and County Hospital.



Patient with chloroma.

When the scalp was removed the cranial bones were found to be separated and held firmly together by hard greenish tissue, 3.5 cm in diameter and 1 cm thick. The tumor mass extended more extracranially than intracranially; the bones were of normal thickness. On the dura there was a deposit of green tissue which followed the sinuses. Here too the tissue was 2.5 cm across and 8 mm thick. The dura between the tumor masses appeared normal. The base of the skull presented the same appearance as the cranial bones described above. The sutures were separated, and between the sutures there was a greenish tumor. The orbits were filled with green tumor masses which caused the eyes to protrude. The ribs and costal cartilages were enveloped in a greenish-yellow tissue 3 mm in thickness.

Microscopic examination of the tumor, bone, meninges, brain, muscle, heart, lungs, liver, kidney, spleen, pancreas and lymph glands showed the tumor to be made up of lymphoid cells. Some of the nuclei of the cells were round and others oval. The cytoplasm varied in amount in different cells. In the areas in which the organs were involved the cells formed dense masses and were held together by a delicate fibrous tissue network. The infiltrations of these cells were chiefly interstitial.

The clavicular and costal periosteum was densely infiltrated with the type of lymphoid cells maintained above.

The muscles showed extensive involvement. The tumor cells were most prominent between the bundles of muscle fiber. The muscle fibers in certain areas were entirely gone, and in their place there were dense masses of lymphoid cells. The serous coverings of the lungs in places were infiltrated with the tumor cells. The same kind of cells were also seen in the alveoli and around the bronchioles and blood vessels.

The splenic pulp was made up of mononuclear cells. The malpighian corpuscles did not show hyperplasia. Many eosinophils were present in the splenic tissue.

In the liver the infiltration was interlobular and intralobular, and it was also seen in the columns between the hepatic cells.

In the pancreas the tumor cells took the same interlobular course and were also present around the pancreatic ducts and acini.

The uriniferous tubules of the kidneys in areas were swollen, and their lumens contained albumin. Between the tubules there was extensive lymphoid cell infiltration. In some parts the infiltration was so dense that it was not possible to make out the kidney structure.

Microscopic examination of the brain did not reveal any pathologic change.

The anatomic diagnosis was general chloroleukosarcomatosis.

A HOME MADE VERTICAL FLUOROSCOPE

Henry L. Shively, M.D. and Charles R. Tyler, Ph.G., New York
Visiting Physician and Radiographer, respectively,
St. Joseph's Hospital for Consumptives

A year ago when the Roentgen laboratory installation was purchased for St. Joseph's Hospital, the limited funds available for the purpose made it necessary to study economy in order to secure all the apparatus desired. By dint of a careful study of our needs, the elimination of everything not strictly necessary, and by collective buying with three other institutions we were enabled to obtain a complete and satisfactory equipment consisting of a 6 to 10 kilowatt interrupterless transformer, a current generating unit for heating the Coolidge tube, a stereoscopic tube stand, an automatic plate changing table, a Wheatstone stereoscope, and vertical fluoroscope at a very moderate cost—not exceeding $1,200.

The listed prices, from $300 to $700, of the manufacturers of fluoroscopes under such fancy names as "orthoscope," "trochoscope" and "diagraphoscope" seemed out of all proportion to the cost of construction, and we determined to make our own. When it is remembered that the fluoroscope is simply a contrivance for suspending the fluorescent screen, carrying the tube box, and securing a synchronous adjustment of the two with adequate protection for the operator, the mechanical problems did not appear beyond the constructive ability of an intelligent carpenter. All the combi-

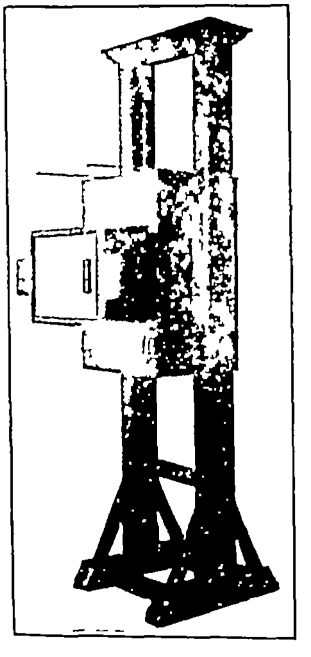


Fig. 1.—Front of fluoroscope with screen suspended.

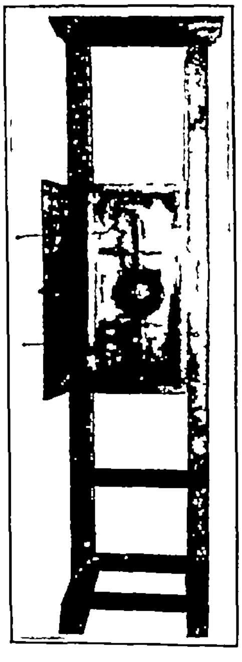


Fig. 2.—Back of fluoroscope; tube box containing Coolidge tube open.

nation vertical and horizontal machines we have seen built in the folding bed manner are clumsy, stiff, difficult to operate, and unsatisfactory, besides being unduly expensive A permanent, upright model was chosen as most useful for our needs, and our experience with this home-made fluoroscope at a cost of $60 and a saving of at least $250 has been so satisfactory that we have thought a description of it might be useful to institutions interested in the installation of Roentgen equipment at moderate cost.

The apparatus consists of a tube box 13 by 13 by 29 inches, covered with sheet lead one-eighth inch thick and hung with counterweights in a solidly constructed vertical frame of oak Inside the box at each end, grooves are provided which allow the insertion of a Kelley-Koett tube board The high tension leads are carried through the hinged door at the back, encased in insulators of heavy glass tubing In the center of the front of the box is a 6 inch square opening for the passage of the Roentgen rays Four inches from the front and parallel to it is a three-fourths inch board, 18 by 30 inches, having a 14 inch square aperture concentric with that in the front of the tube box The interior of the box is lined with mica sheets to prevent "jumping" of the high tension current

The fluoroscopic screen, 12 by 16 inches, of lead glass with protected handles is suspended from sliding brass rods attached to the top of the tube box, permitting the screen to be freely moved from side to side, toward or away from the box, and adjusted to the intervening surface of the body of the patient under examination The uprights of the supporting frame are hollow and enclose the counterweights, which are of lead, weigh about 350 pounds, and were cast to order

The leaded box is held in a perpendicular position by means of guides running in slots on the inner faces of the uprights The counterweights are attached to the top of the tube box by wire cables running over pulleys similar to those used in suspending window sashes, inserted in the inner faces of the uprights

The apparatus was constructed in the hospital workshops at a cost of $60 by our own mechanics, an estimate of the various items being lumber, varnish, etc, $25, lead sheets and counterweights, $27, Kelley-Koett tube board, $8

A liberal estimate for the cost of necessary labor would be $25 The machine is flexible and easy working, has been in use for ten months, and has proved satisfactory in every way

303 Amsterdam Avenue—168 West Eighty-First Street

Syphilis in Massachusetts—In a report of progress on a regulation of the state authorizing the state department of health to provide for the prevention and suppression of syphilis, Commissioner Allan J McLaughlin (*Public Health Bulletin,* February, 1917) says that approximately 10 per cent, probably many more, of the inmates of the state insane hospitals are insane because of syphilis On this basis there are about 1,700 syphilitics continuously under the care of these hospitals Such studies as are available, McLaughlin says, indicate that about 5 per cent of syphilitics develop general paralysis of the insane In 1914, 258 such patients were admitted to the state insane hospitals, which number would represent about 5,160 syphilitics The commissioner says that there is reason to believe that syphilis is responsible for possibly one quarter of all stillbirths In 1914 there were 3,478 stillbirths in Massachusetts, which means that 869 infants were born dead from the effects of this infection, which was present in their mothers and probably in most of their fathers Since the establishment of the Wassermann laboratory by the state department of health in June, 1915, some 37,000 tests have been made, 5 per cent. of which were positive, representing, it is said, at least 850 syphilitics This is believed to be a fair representation of the condition of the general population with reference to syphilis, and by some observers is considered too low As a cause of suffering, sickness and death, the commissioner says syphilis undoubtedly ranks next to lobar pneumonia and tuberculosis, the two latter being responsible, respectively, for about 6,000 and 4,000 deaths annually

---

APPARATUS IN BIRTH FRACTURE OF FEMUR

Thomas H Russell M D, and Harry S Reynolds M D
New Haven Conn

The case reported below presented problems which were so easily and satisfactorily overcome by a new application of a known principle that it seems worthy of mention

Feb 3, 1917, one of us (H S R) was called to see A. D, a girl, aged 9 days, because of swelling of the left thigh The delivery had been effected by a colleague after a difficult dry version Two physicians, who had previously been called, had advised the family that the child could be delivered only by morcellation At the time of delivery no lesion had been noticed, although the obstetrician has stated that he noticed a snapping sensation

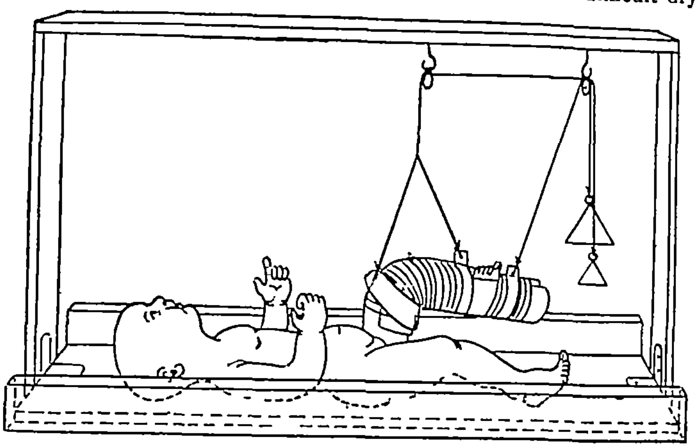


Fig 1 —Construction and arrangement of apparatus.

The baby had nursed well and had seemed all right, except for this swelling and a disposition to cry most of the time

On physical examination, the left thigh was found to be shortened, and considerably increased in its diameter, the thigh muscles being hard, firmly contracted and bulging A point of false motion was detected in the femur at about the junction of its upper and middle thirds, the lower fragment had overridden the upper laterally and there was marked angulation A roentgenogram, made by Dr A P Bergman, later confirmed the diagnosis of birth-fracture of the femur, and revealed a beginning new-bone formation between the fragments

As the nature of the case brought it outside of the domain of pediatrics, the cooperation of a surgeon (T H R) was enlisted

The problem called for a scheme of treating a patient, from whom no cooperation could be expected, by providing efficient extension with a minimum of irritation of the delicate skin, which would not well tolerate adhesive straps for extension, repose in as natural a position as possible in a comfortable bed, portability, convenient means of nursing, and suitable and hygienic administration of the baby's toilet, the care falling on a mother burdened by a large family of small children and many household duties These demands were successfully complied with by the following simple expedient

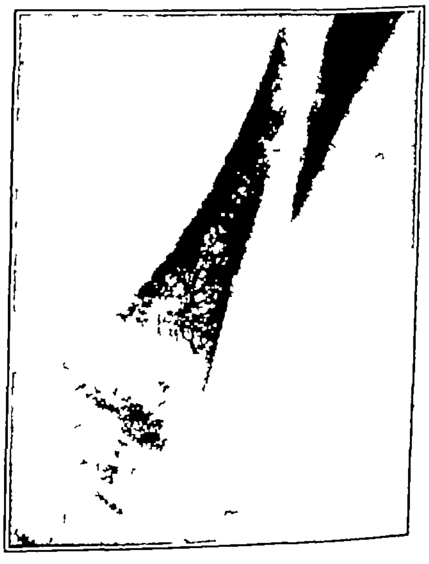


Fig 2 —Condition of fracture at time of beginning treatment, new bone formation already begun between fragments

A plaster saddle was molded to fit the under surface of the knee, which was flexed to form an angle of about 120 degrees with the thigh, and was carried below the foot about 3½ inches to act as a counterweight, this saddle, suitably padded, was bandaged on beneath the knee and suspended from the crossbar of an apparatus constructed of a board 13 by 32 inches with side strips 3 inches wide, and with a 21 inch upright at each end to which was attached a horizontal crosspiece the suspension being carried out by means of adhesive straps around the saddle, a cord and pulleys and a 3 pound weight The exten sion of plaster below the foot acted as a counterweight to hold the foot down and prevent the saddle from sliding out of position As there was a slight tendency for the limb to swing from its proper axis after the patient's toilet etc had been attended to a string was attached to the end of the saddle and the latter held in proper position with slight traction by means of a light weight attached to one of the pulleys When the limb was suspended the patient promptly fell asleep, evidencing the comfort of the apparatus

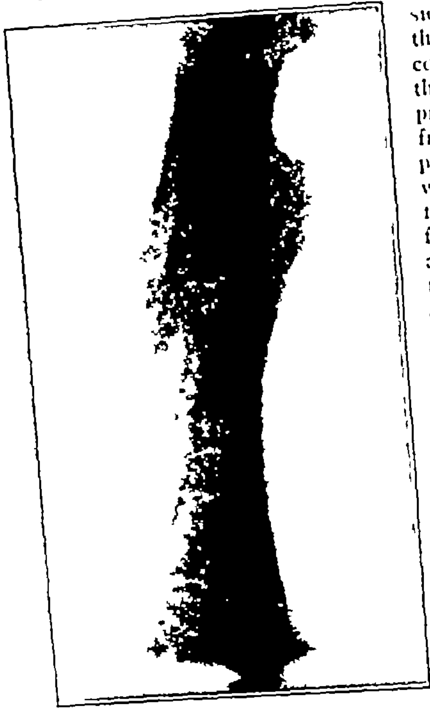


Fig 3—Condition fifty three days after fracture.

It was hoped that the traction would pull the fragments into position, but this had to be accomplished the following day by manipulation as malunion had already begun

February 20, the union appeared to be so well under way that the leg was taken down Union has taken place without shortening or other deformity

The Buck and Hodgen splints are not well adapted for children, and Bryant's extension places the patient in a most unnatural position. DaCosta states that "in children under 3 years of age the extension apparatus will not satisfactorily immobilize the fragments" Stimpson has recommended vertical extension of both legs in children Eisendrath (Keen's 'Surgery") says, "In children a fracture of the shaft is most easily treated by the use of Schede s vertical suspension"

The methods advocated by these authors all necessitate the use of adhesive strips applied to the skin, which our saddle principle obviates Our method as a whole, we believe, fulfils all of the requirements enumerated in the early part of this report.

Discovery of Ether—Ether was prepared for the first time in the sixteenth century by Valerius Cordus from spirit of wine It was formerly thought to contain sulphur, and was therefore given the name sulphuric ether, still in use. Its true composition was established by Saussaure and by Gay-Lussac (1807 and 1815) and the constitution was enunciated by Laurent and Gerhardt and confirmed experimentally by Williamson It was thought for a long time that the sulphuric acid employed in the manufacture of ether possessed the sole function of fixing and subtracting water from the alcohol Since, however, it was found that water formed in the reaction always distilled with the ether, this hypothesis became invalid, and Berzelius and Mitscherlich attributed the reaction of etherification to the catalytic action of the sulphuric acid—General and Industrial Organic Chemistry, Dr Ettore Molinari, Translated by Thomas H Pope, Second Edition, 1913, p 192

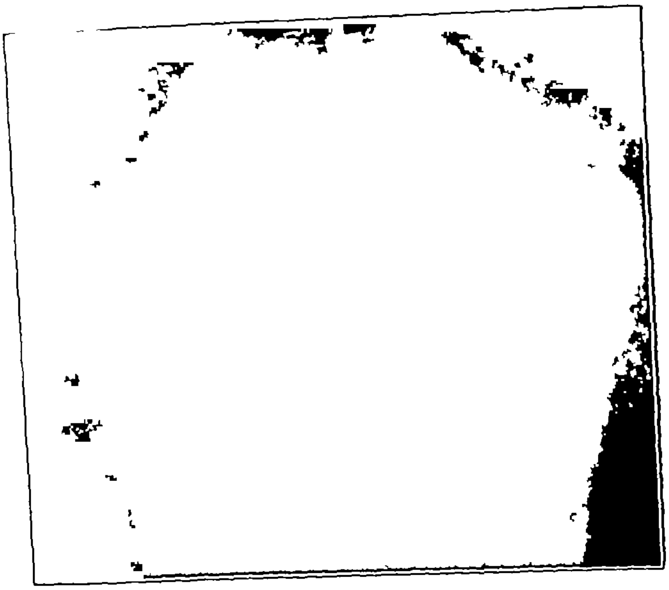
UNIQUE ROENTGENOGRAPHIC DEMONSTRATION OF A URIC ACID CALCULUS

A Raymond Stevens, M D, New York
Assistant Attending Surgeon, Urologic Service, Bellevue Hospital

This brief report of a case of uric acid ureteral calculus illustrates a novel means of diagnosis, as demonstrated by the accompanying roentgenographic print

A diagnosis of uric acid stone usually depends on the wax-tipped catheter, or a visual demonstration of dilatation of the ureter and pelvis above the obstructing stone by means of a pyelogram and ureterogram In a few instances, after the injection of collargol into the pelvis of the kidney and subsequent draining off of the collargol, an otherwise obscure calculus has become evident on Roentgen examination because of the adherence of some of the collargol to the rough surface of the calculus In this following case, the urate stone appears on the roentgenogram as a vacuole in the dense shadow thrown by thorium injected into the ureter

The patient a man, aged 51 was admitted to the medical side of Bellevue Hospital, Sept 30, 1916, and subsequently transferred to Dr Keyes urologic service He gave a history of intermittent passage of dark colored urine for about a year, and of dull aching pain in the abdomen to the left of the umbilicus off and on for four months The urine showed blood microscopically Repeated Roentgen examinations revealed at time suspicious shadows in the left kidney region, but never any suggestion of calculus in either ureter The genital organs and bladder seemed normal Catheters passed up the right ureter easily but on two occasions were obstructed at a point from 4 to 5 cm up the left ureter A little pus was obtained from both kidneys The output of urea and phenolsulphonephthalein indicated practically equal function The only prepared wax-tipped catheters at hand would not enter the small left ureteral orifice By manipulation, a 5 F catheter was made to pass the obstruction, thorium was injected and a roentgenogram taken. The diagnosis of a uric acid or urate ureteral calculus was based on the dilatation of the ureter, and on the presence of something perme-



Appearance of urate stone as a vacuole in the shadow thrown by thorium injected into the ureter

able to the Roentgen ray situated at the lower portion of the dilatation in the field of thorium

I performed an extraperitoneal operation, and a dilated ureter with an impacted rough stone near the bladder was found The calculus could not be milked up the ureter, and was removed by an incision in the ureter over the stone Chemical analysis showed the latter to be calcium urate

40 East Forty-First Street.

A RADIUM APPLICATOR FOR THE THROAT

C W Hanford, M D, Chicago

In treating the tonsil and soft palate with radium, it is necessary that the tube containing the radium should come in close contact with the neoplasm for a number of hours It is impossible for the patient to hold it in position When I am called to treat cancer at these sites, I have a dentist make a rubber plate to fit the upper jaw At the back of this plate and on its undersurface I have a pure silver wire embedded The wire is about 2 inches long and 1 mm in diameter (Fig 1) The tube containing the radium is properly screened (Fig 2), and the wire is then wound about it and the whole then covered with a finger cot The wire can be bent to any angle, and when the plate is in position, the tube, by manipulation of the wire, will come in direct contact with the part to be irradiated and will remain so In order that the plate will stick to the roof of the mouth, I sprinkle a little powdered gum on the top of the plate, which insures its holding in place.

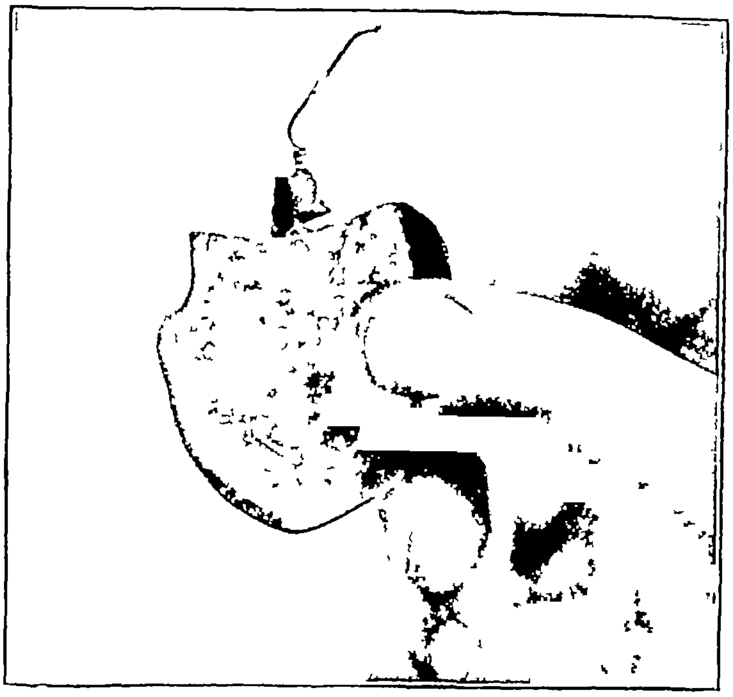


Fig 1—Plate and wire.

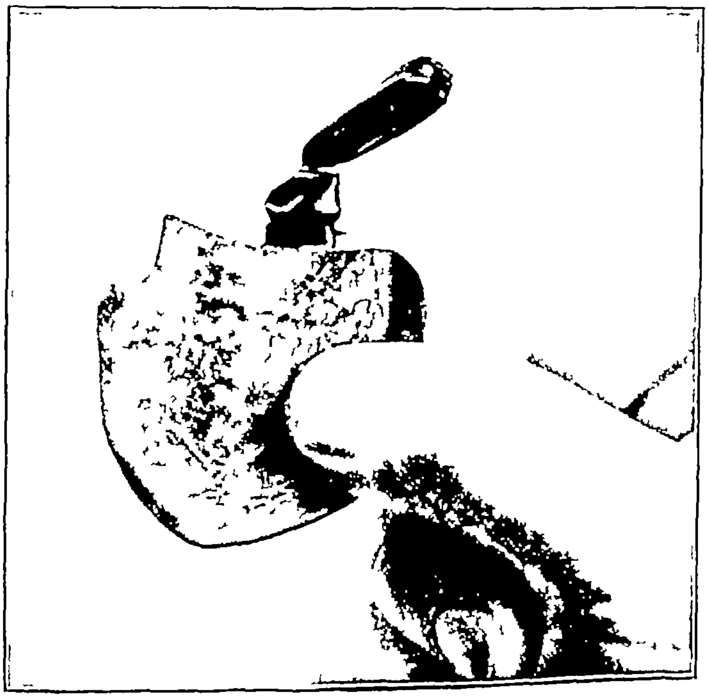


Fig 2—Applicator ready for insertion

31 North State Street

A TREATMENT FOR THE SOLITARY FURUNCLE

Willard Bartlett, A M, M D, St Louis

Trauma plays a definite role in the development of a solitary furuncle, after the primary infection has taken place This lesion, which is so frequently encountered on the back of the neck of a man, is most common in my experience just at the height of the top of the collar, and located immediately over the spinous processes in the midline, or over the prominence of the right or left muscle masses—areas in which collar and clothing exert the most pressure The truth of the foregoing statements would seem to be borne out by the rarity of this malady in women, who treat the back of the neck, as far as dress is concerned, with much more consideration than do men The proposal of an early abortive treatment is based on this anatomic observation

On the appearance of the first symptoms, the lesion should be protected with a bunion plaster or a vaccination shield It must not be pricked, touched with the fingers, squeezed out, or rubbed by the collar and clothing It should be exposed to the direct rays of the sun, or to those of an ordinary incandescent light bulb, as much as possible The action of sunlight in the treatment of inflammatory lesions is too well known to justify extended consideration, and Crile has recently called our attention to the fact that the light rays of the ordinary incandescent bulb are practically analogous to those of the sun Acetylsalicylic acid in doses of from 5 to 10 grams greatly aids in limiting spontaneous pain during this period If the furuncle is not aborted by this treatment, one should wait until a frank pustule has developed, then infiltrate in healthy tissue around the lesion a definite ring of 0 5 per cent, novocain, to the ounce of which 4 drops of 1 1,000 epinephrin solution have been added After the lesion has become insensitive to pain, it should be opened widely by a crucial incision, made with a thin platinum electrocautery blade Rather long incisions can be made without danger of opening up healthy tissue to infection If sufficient time has elapsed before the incision is made, the necrotic center of the lesion can be lifted out at once, but if it is not loose, gentle suction should be employed every hour or so, the wound being merely covered by a vaccination shield and exposed to the rays of an incandescent bulb, placed so close to it as to produce an agreeable warmth

A 15 watt lamp gives a delightful sense of warmth, as my own recent experience has demonstrated, while the ordinary green metal household shade protects surrounding parts from heat and light In a short time the necrotic center can be sucked out in toto, after which the defect rapidly granulates and no further treatment is needed beyond protection of the wound with a vaccination shield, and an occasional cleansing with alcohol, to prevent reinfection of the surrounding skin openings In case the lesion is on the back of the neck and any form of circular bandage is worn, painful pressure and distressing massage of the lesion are unavoidable every time the head is turned To avoid this form of torture, the patient endeavors, by using all of the neck muscles, to hold the field at rest, and soon excessive local fatigue makes his lot still more unhappy It may further be said that any form of dressing makes a pus poultice, and accounts in a great measure for reinfections and neighboring secondary furuncles, while the growth of bacteria is hindered by the drying up of excretions from a wound exposed to the air

This treatment may be carried out by any intelligent member of a family or office force, which brings it well within the range of possibility for many men, without upsetting the ordinary routine of life If carried out faithfully, with regard for every detail, it robs this distressing malady of its most serious features The sort of stock affected by horsemen and golfers can readily be worn over the vaccination shield and the patient, though somewhat uncomfortable, will be much more presentable than is the case when an otherwise well groomed man with a stiff neck goes about, minus collar and tie, with a surgical bandage where they should be

Bier's suction rapidly reduces the edema in adjacent muscle with the consequent early disappearance of the stiff neck so characteristic of the condition

410 Metropolitan Building

A SIMPLIFIED METHOD FOR DETERMINING THE ISO-AGGLUTININ GROUP IN THE SELECTION OF DONORS FOR BLOOD TRANSFUSION

W. L. Moss, M.D., Baltimore

The introduction within the past few years of satisfactory methods for the indirect transfusion of blood has done much to popularize this procedure. Fortunately the popularity of the procedure rests not solely on a simple and satisfactory technic but also on its therapeutic value in a number of conditions.

It is now generally recognized that isohemolysis and iso-agglutination constitute a possible source of danger in transfusion unless a donor is selected who belongs to the same iso-agglutinin group as that of the patient.

Although many transfusions have been performed between members of different groups without untoward results, there are a sufficient number of "accidents" on record to remind one that there is an element of danger. That the transfusionist appreciates this is evidenced by the fact that more and more frequently he or his colleague of laboratory habits is taking the trouble to select donors belonging to the same group as the patient, although this involves the use of a technic which while not difficult, requires a little practice, and is somewhat time consuming.

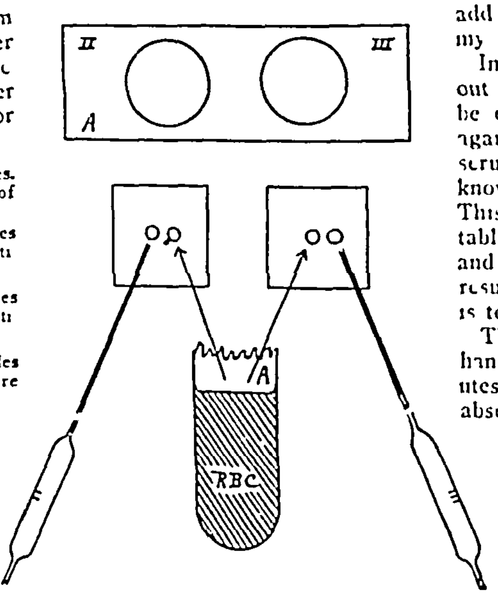
Depending on the ability of the serum to agglutinate the corpuscles of other individuals and of the corpuscles to be agglutinated by the serum of other individuals every person falls in one or other of four groups:

Group I. Serum agglutinates no corpuscles. Corpuscles are agglutinated by the serum of Groups II, III and IV.

Group II. Serum agglutinates the corpuscles of Groups I and III. Corpuscles are agglutinated by the serums of Groups III and IV.

Group III. Serum agglutinates the corpuscles of Groups I and II. Corpuscles are agglutinated by the serum of Groups II and IV.

Group IV. Serum agglutinates the corpuscles of Groups I, II and III. Corpuscles are agglutinated by no serum.



Technic employed in determining group to which an individual belongs by testing his corpuscles against known Group II and Group III serums. If a number of individuals are to be tested the tubes containing the corpuscle suspensions may be designated by letter and the corresponding letter placed on the slide.

The serum of a given individual may or may not contain an isohemolysin, but if an isohemolysin is present it acts in accordance with the laws governing the action of the iso-agglutinins. Thus the serum of Group I, which contains no iso-agglutinin, never contains an isohemolysin. The serum of Group II may or may not contain an isohemolysin, but if present it can act only on the corpuscles of Groups I and III. If the serum of Group III contains an isohemolysin, it can act only on the corpuscles of Groups I and II, while isohemolysin occurring in the serum of Group IV may act on the corpuscles of Groups I, II and III.

Consideration of this classification shows that if transfusion is performed between members of the same group, the danger of iso-agglutination and isohemolysis is obviated, but if the patient and donor belong to different groups, the possibility of danger is present.

TABLE 1.—SERUM TEST AGAINST KNOWN CORPUSCLES*

Serum	Corpuscles		Group to Which x Belongs
	Group II	Group III	
x	0	0	I
x	0	+	II
x	+	0	III
x	+	+	IV

* In the tables + represents agglutination, and 0 no agglutination.

The method usually employed for determining the compatibility of patient and donor with reference to iso-agglutinin and isohemolysin consists in testing the serum of the patient against the corpuscles of each of the prospective donors, and the serum of each of the prospective donors against the corpuscles of the patient. Any person whose serum does not agglutinate the patient's corpuscles and whose corpuscles are not agglutinated by the patient's serum belongs to the same group as the patient, and is suitable as a donor as far as iso-agglutinin and isohemolysin are concerned.

TABLE 2.—CORPUSCLE TEST AGAINST KNOWN SERUM

Corpuscles	Serum		Group to Which x Belongs
	Group II	Group III	
x	+	+	I
x	0	+	II
x	+	0	III
x	0	0	IV

This test determines which, if any, of the prospective donors are in the patient's group, but does not indicate what that group is.

Rous, Minot, Brem and others have devised simplified methods for the selection of a donor of the same group as that of the patient. To these I wish to add one which has proved satisfactory in my experience.

In a previous publication[1] I have pointed out that the group of any individual may be determined by testing his corpuscles against known Group II and Group III serum or by testing his serum against known Group II and Group III corpuscles. This is illustrated by the accompanying tables, which show all the possible results and the group to which x belongs for each result, x being the individual whose group is to be determined.

The test is easily performed in the hanging drop, it requires but a few minutes to set up, and the presence or absence of agglutination is observed under the microscope.

Group II and Group III serum may be kept on hand in the laboratory ready for use, it is then necessary only to get a single drop of blood in salt solution for corpuscles in order to determine the group of any individual.

The technic which I employ and have found satisfactory requires Group II serum, Group III serum, capillary pipets, hollow-ground slides, cover slips, test tubes, physiologic sodium chlorid solution (0.85 per cent), microscope.

The collection and preservation of Group II and Group III serum is accomplished thus: Five c.c. of blood are withdrawn from an arm vein of a Group II individual and the same amount from a Group III individual, placed in sterile centrifuge tubes, allowed to clot, centrifugalized, and the serum transferred to other sterile tubes. From the latter, capillary pipets are to be filled.

A number of capillary pipets are prepared from glass tubing 3 or 4 mm. in diameter by drawing each end out into a capillary. The capillary at one end is cut off within 1 inch of the body of the tube. That at the other end is left 6 or 8 inches long. These are sterilized and half are used for the Group II and half for the Group III serum, the long capillary stem being filled half full of serum, the tubes tilted so that the end of the column of serum will be about an inch from the end of the capillary, and then both ends of the tube sealed in the flame. Two file marks on the glass indicate the tubes containing Group II serum and three marks those containing Group III serum The tubes are stored away in boxes at room temperature but protected from the light These tubes may be kept in the laboratory and are ready for immediate use whenever required Serum preserved in this way retains its agglutinating power six months or longer

---

[1] Moss, W. L.: Paroxysmal Hemoglobinuria, Bull. Johns Hopkins Hosp., 1911, **22**, 238-247.

With Group II and Group III serum on hand, the determination of the group of any individual is easily and quickly done A single drop of blood from the finger-tip or ear is allowed to fall into a test tube containing 8 or 10 c c of physiologic sodium chlorid solution (0 85 per cent) The tube is shaken or rotated in order to obtain a uniform suspension On each of two cover slips a very small drop of the corpuscle suspension is placed by means of a capillary pipet or platinum loop, to one a drop of Group II serum is added and to the other a drop of Group III serum The serum and corpuscles are mixed on each cover slip, inverted over a hollow ground slide, and examined under the microscope Agglutination may take place in a few minutes at room temperature, but it is a safe rule to allow half an hour at 37 C to elapse before concluding that there is no agglutination

---

CHONDROMA OF THE SOFT PALATE, LONG OVERLOOKED

Ben C Gile M D, Philadelphia

It sounds like a paradox to say that we need to be reminded of familiar truths, but this is a fact. Every physician knows that a correct diagnosis is invaluable and that we should earnestly strive to discover and remove the cause of the diseases we encounter, and yet quite frequently we learn of cases in which the treatment has been exclusively symptomatic and etiologic investigation has been entirely neglected Of course, we are often required to treat symptoms it may be our first duty to check a hemorrhage or relieve a severe pain, irrespective of causation, when we have time for investigation, however, especially in chronic cases, purely symptomatic treatment is justified only by conditions in which (1) the cause cannot be discovered, (2) the cause is a self-limiting process, as in many of the disorders occurring during pregnancy, or (3) the cause, though known, is beyond remedy and must be reckoned with as a permanent factor Apart from situations such as these, the restriction of our therapy to the palliation of symptoms is negligence hard to condone

In the case described herein, a slowly growing tumor, in an accessible locality, had reached a considerable size and had given rise to a number of symptoms The patient had been successively under the care of four practitioners, two of them laryngologists Various remedial measures, medical and surgical, had been employed, but all treatment had been addressed to symptoms no one did anything with the causal tumor and, in truth, only one of the four scrutinized the region in which it was to be found The varied treatments temporarily palliated the symptoms, but had no permanent effects, and the patient was growing worse until at last the tumor was recognized as the sole cause of the morbid conditions, and was extirpated, bringing about complete recovery

As some of the statements in this narrative may seem strange, I wish to be particularly clear and definite regarding the authority on which they rest Nothing which transpired before I took charge of the case came within my own personal knowledge When the patient consulted me, she had already parted with her former advisers and I had no opportunity to confer with any of them The patient is a young woman of intelligence, and I believe her to be entirely trustworthy On account of her prolonged treatment and her large outlay of money, this illness was for her a very trying episode, and she put in writing a history of her experiences, from the time when she first sought medical aid until its final cessation, on her recovery of health It is on this record that I have depended for the facts preceding the time when I made her acquaintance. I believe that, to the best of her ability, she has told with accuracy what occurred in her case

REPORT OF CASE

History—In 1911, Miss E W, aged about 30, sought the advice of her family physician, because of persistent earache on the right side There was no discharge, and hearing was not impaired The throat was not examined, and the treatment consisted of internal medication The pain gradually passed away

In 1913 there was another prolonged attack of earache and an intercurrent tonsillitis Both subsided in a couple of weeks, but left a cough which continued for months The same physician was in charge, and the patient took many bottles of medicine, the character of which she did not know There were no surgical procedures

In 1914 a very painful abscess developed in the right ear and was lanced by Dr X, a laryngologist No examination of throat or nose was made Later in the same year occurred another attack of tonsillitis with troublesome cough These affections were treated by Dr Y, who administered a good deal of medicine by the stomach No surgery was done, and no examination of the nose or of the nasopharynx was made

Near the end of 1914, the patient, much discouraged by her frequent attacks of illness, applied to a laryngologist, Dr Z, and was under his care for eight months, extending beyond the summer of 1915 There was no surgery, but medicines were applied to the throat and nostrils With warm weather the symptoms were somewhat mitigated

In April, 1916, there was another abscess in the right ear, accompanied by a persistent cough The patient returned to the laryngologist, Dr Z, who lanced the abscess and also inspected the soft palate, as far as that could be done by simply looking into the mouth without any instrumental aid, or any attempt to take a posterior view Inadequate as this examination was, it showed that the soft palate was distended by tumefaction of some kind, and Dr Z informed the patient of the abnormal condition which existed, adding that he did not know what the growth was and did not think it wise to interfere with it A Wassermann test was made with negative result, but the eustachian catheter was not used, nor were the Valsalva or Politzer methods of inflation The patient continued to visit Dr Z up to August, 1916, when swelling again appeared in the right ear and lancing brought temporary relief, but the trouble soon returned, and Miss W, in a discouraged frame of mind, was looking forward to another repetition of the incision, when the condition of a tooth led her to consult Dr Briggs, a dentist in whom she had confidence This was a fortunate incident, for Dr Briggs assured her that the throat was seriously affected and required radical treatment to reach the cause of the recurrent disorder in the ear At his solicitation she came to my office, Sept 30, 1916

Examination—At that time, in addition to mental and physical depression, the patient was suffering from a rasping cough and her throat was sore, though not acutely painful Her chief discomfort was in the right ear, in which there was a sensation of tension and stuffiness, and she was strongly impressed with the notion that the time had come for another cutting of this much-incised organ Tests of the hearing showed that it was decidedly impaired on the right side, and they also localized the trouble in the middle ear Examination with the aural speculum indicated that there was considerable liquid in the right tympanitic cavity, escape being prevented by occlusion of the eustachian tube on that side

The anterior view of the fauces showed, at the first glance that the soft palate was in a very abnormal condition It was distorted by some internal pressure causing it to bulge forward The quinsy points were conspicuous, showing through the mucous membrane were small nodules, pale, firm and hard, but not tender under the touch. The postnasal mirror showed a small chink behind the soft palate on the left side, but the right was filled up by a swelling projecting from the soft palate into the nasopharynx and preventing the finger from entering the postnasal space. This adventitious structure was firm and gave no sign of inflammation. Neither of the eustachian eminences could be seen Inflation by the Politzer method succeeded on the left side, but failed on the right. The eustachian catheter passed readily along the nasal floor but, when its beak reached the soft palate, it met an obstruction and could not be advanced farther, nor could it be rotated.

These examinations proved that a tumor of considerable size was embedded in the soft palate, and from the signs given to sight and touch, combined with the clinical history, I came to the conclusion that it was a chondroma, a judgment which was corroborated by the laboratory tests made subsequently. I informed the patient of what had been found, telling her frankly and firmly that the best treatment, indeed the only proper treatment, was the entire removal of the tumor; that this course would give her good prospect of recovery, but that partial half-way measures would be of no advantage. She took a sensible view of the matter and agreed to a prompt operation.

Just here let me say that I claim no credit for recognizing this neoplasm. It was in an accessible locality and could be seen distinctly by posterior rhinoscopy. Any laryngologist should have made himself familiar with its chief features on his first inspection of the throat. The puzzling questions are why one specialist never looked for it and why another after seeing it told the patient that he did not know what it was and considered it best to let it alone.

Operation and Results.—Two days later, October 2, the operation was performed under general anesthesia induced by ether. The right tonsil, which was somewhat morbid, was enucleated and the wound enlarged until it reached the level of the upper margin of the chondroma. This was dissected out. When its attachments had been severed it was seen to have a lobular structure and came away in three pieces. Taken together these weighed a little more than an ounce. Bleeding was controlled by pressure and the postoperative condition was normal.

The patient had a rapid convalescence. Although the right ear received no topical treatment, hearing became absolutely normal in forty-eight hours. The cough showed prompt improvement, and in ten days ceased entirely. Healing was complete on the sixteenth day and there remained no disability of any description.

More than five months have now elapsed since the operation, and no morbid sequels have appeared. I saw the patient within a fortnight and she was in excellent health and spirits. There can be no doubt that the chondroma was the cause of all the varied symptoms from which she had suffered during six years and whose persistence threatened to bring her to invalidism.

COMMENT

I have given the history of this case thinking that it may prove both a caution and an incentive. We are all liable to err, and if oversights, such as those narrated, are frankly criticized, this is not done with a purpose to humiliate our colleagues, who appear to have been at fault, but in the hope that all of us may be stimulated to renewed appreciation of the importance of thoroughness in searching for causation.

Only by making a correct diagnosis and directing our treatment to the radical removal of the causes of disease can we do our full duty to our patients and attain that high professional ideal which combines wide knowledge of medical science with expert proficiency in the honored profession, which is our chosen vocation.

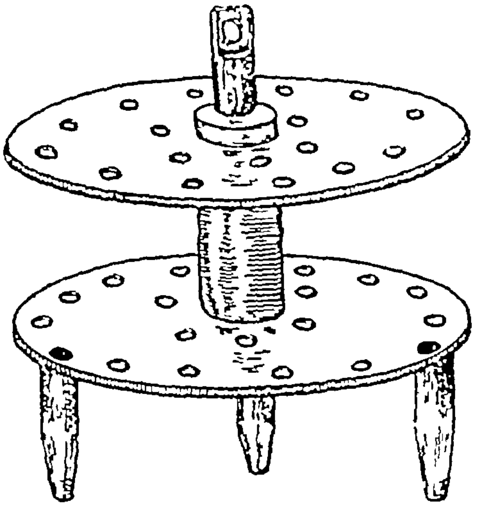
1906 Chestnut Street.

Practical Theories.—The practical effect of a belief is the real test of its soundness.—Froude.

STERILIZATION OF SURGEONS' KNIVES AND SCISSORS BY HEATING IN LIQUID PETROLATUM

Henry Lyman, M.D., Boston

The subject of properly sterilizing knives and scissors has always given the surgeon more or less trouble. Boiling water or 70 per cent. alcohol, if applied long enough to be effective, inevitably destroys the edge, while the instruments so treated have a strong tendency to rust. It has been my practice for some time to sterilize needles which were to be used for drawing blood by heating them in liquid petrolatum at 120 C. for twenty minutes. The needles may then be left for an indefinite length of time without danger of rusting, and are moreover coated with a film of oil which tends to prevent clotting. I soon noticed that needles so treated were peculiarly sharp and could be used and resterilized many times without losing their points. It occurred to me that the same method might well be employed on the scalpel and scissors of the surgeon with advantage, provided this heating did not affect the cutting qualities of the instruments. I therefore sharpened a knife to a razor edge, heated it in the oil at 200 C. for over half an hour and again tested the edge. It was exactly as sharp as before heating, and repeated experiments with other knives and with scissors gave the same result. The reason for this seems clear. Both boiling water and alcohol attack steel, thus ruining the edge, while liquid petrolatum, being exceedingly inert chemically, has no such effect.



Needle rack.

The first question which arises in our minds in this connection is, Does oil, which may be considered dry heat, destroy organisms as quickly at the same temperature as does boiling water? Since no adequate references could be found in the literature I was obliged to investigate this point myself. I was fortunate enough to interest Dr. Harold C. Ernst in this work, and the experiments were carried out under his supervision in the bacteriologic department of the Medical School of Harvard University.

The following technic was employed: Strips of tin used to simulate scalpels, were dipped into a culture of the organism to be investigated, dried and dropped into a test tube containing about 10 c.c. of liquid petrolatum previously heated to the desired temperature in an oil bath. After the temperature had been maintained for ten minutes, the strip was removed and firmly stroked on a slant of agar nutrient medium. For fear the organisms might have been washed off in this process, the oil was treated with sterile bouillon, thoroughly stirred, allowed to settle, the bouillon pipetted off, and both the bouillon and the agar incubated. Numerous controls were run on each batch of determinations.

It was found by this method that the *Staphylococcus pyogenes-aureus* and *albus* were killed in ten minutes at a temperature of 105 C. and that anthrax spores, possibly the hardest form of life to destroy of which we know, were killed in ten minutes at 150 C. The staphylococci were killed at 150 C. in fifteen seconds. If, therefore, the surgeon will keep his knives and scissors in an oil bath at 150 C. for ten minutes, their cutting qualities will not be affected, they will not rust, and they will become the strongest link in the chain of asepsis, instead of being the weakest, as is the case under the usual method of sterilizing.

To obtain the best results, the oil used should have the following characteristics: it must be nonirritating, it must be chemically inert, it must be clear so that the instruments may be easily seen, and it must have the highest possible flash point on account of danger from fire Animal and vegetable oils, such as sperm and cottonseed, have a tendency to polymerize on repeated heating and are therefore unsuitable Liquid petrolatum fulfils all the conditions well, but as it costs from $6 to $7 a gallon at retail, it is expensive when a large sterilizer is to be used, although it may be used over again indefinitely To avoid this difficulty, I have obtained from Alden Speare & Sons, Cambridge, Mass, a so-called cutting mineral oil at 75 cents a gallon which, in spite of being somewhat yellow, answers the purpose perfectly and which seems to destroy bacteria at the same temperature as liquid petrolatum Its flash point is about 225 C Doubtless any nonirritating hydrocarbon lubricating oil of good grade would answer the purpose

---

* From the Huntington Memorial Hospital.

Since thermometers are easily broken and constant temperature devices are expensive, the simplest way of telling when the oil bath has reached 150 C. is by an indicator A small glass ampule containing chlorid iodid of mercury, such as was used in the Folin method for determining urea, may be placed in the coolest part of the sterilizer This salt is a red powder at room temperature, turns yellow at 118 C, and melts to a clear amber fluid at 155 C All that is necessary, therefore, is to keep the indicator melted for ten minutes Since the oil if heated very hot will smoke and smell somewhat, it is as well to turn the gas or electricity partly off after the indicator becomes yellow

NEEDLE RACK

The needle rack illustrated herewith, devised by Dr R D Bell, facilitates the heating of these instruments in oil As many needles as desired are placed in the rack, points down, and the rack lowered into a beaker full of oil, the oil heated at 150 C for ten minutes, and the rack picked out with a sterile wire hook or mouse toothed forceps It is allowed to drain for a moment or two, and then placed in a dry sterile receptacle with a cover to protect the contents from dust, an ordinary dressing jar does very well The needles may be picked out by the butts with unsterile fingers as needed, and a large number may be thus kept ready for immediate use

---

THE RESPIRATION OF SIMPLE CARDIAC FATIGUE

Leo Ricen, Ph D, M D, Portland, Ore

I have observed a type of breathing which resembles the Cheyne-Stokes respiration in its first phase, but differs from it in its second phase, thereby constituting a type by itself

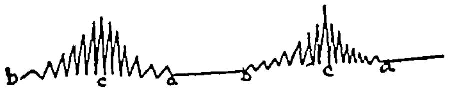


Fig 1—Cheyne Stokes respiration

The Cheyne-Stokes type of breathing is usually represented in a graphic manner, as in Figure 1, in which *ab* corresponds to the period of apnea, which is followed by a series of respirations (*bc*) at first short and shallow and then gradually increasing in rate and volume until a maximum is reached, after which a gradual return to the apneic state takes place

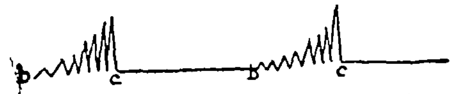


Fig 2—Respiration of simple myocardiac fatigue.

The type of breathing which I have observed is graphically represented by Figure 2 In it we have the same apneic state (*cb*) followed by a gradual increase period (*bc*), but the period *ca* (Fig 1) of gradual decrease is lacking, being replaced by the period of apnea, which sets in immediately after the deepest and longest breath

I have found this type of respiration in cases of cardiac fatigue before actual decompensation takes place By a careful watching of the patient this symptom can be made use of for the prevention by proper treatment of serious consequences

Therapeutics

DISTURBANCES OF THE KIDNEYS

(*Continued from page 1817*)

POSTOPERATIVE RENAL INFECTION

This should be suspected when, during convalescence, the patient has a sudden chill, mild or severe, a rise of temperature, with or without pain in the affected kidney, and head symptoms, followed by irregular and remittent fever This is true, of course, only when more obvious causes of these symptoms are excluded The urine is at first scanty, later it may show albumin, blood, pus, casts and colon bacilli or other bacteria

PYELITIS IN INFANCY

This disease is about three times as frequent in girl as in boy babies, and the colon bacillus is by far the most frequent germ of infection found Smith[131] states that the pelvis of the kidney is the part most commonly affected, with the ureters and bladder generally normal Some cases may show inflammatory changes in the kidney substance, due to extension from the pelvis of the kidney Even in children, the right kidney seems to be the one most frequently affected in unilateral infection

Smith gives a long list of references, but thus sums up the mode of infection

> From the intestinal tract or some other source bacteria get into the lymphatic vessels and then into the blood, or possibly directly into the blood They are transferred by the blood to the kidney After reaching the kidney they pass through the glomeruli and are excreted at the pelvis They may pass out of the body in the urine without doing any damage, or they may set up an infection at the point of excretion, that is, produce a pyelitis

The colon bacillus probably comes directly from the intestinal tract Smith and other writers agree that the gastro-intestinal tract should be properly treated in pyelitis, not only when the colon bacillus is the source of infection, for, as in adults, other bacteria may reach the kidneys and cause infection from such sources as the tonsils Not only typhoid bacilli and tubercle bacilli, but also colon bacilli may pass through the kidney substance without causing any localized infection While it is not thought that colon bacilli or other bacteria often travel upward, even in women, some injury may cause absorption of these germs, which are so constantly present in the genital organs of females

There is a difference of opinion as to the frequency with which colon bacilli occur in the urethra of female children and of women Alsberg[132] found colon bacilli in the urethra of adult women in 100 per cent of the cases On the other hand, Beeler and Helmholz[133] say that while pyelitis is much more common in young girls than in boys, the colon bacillus is not normal in the female urethra, and they came to this belief after examining thirty infant girls and thirty-one girls over 2 years of age In infections not genito-urinary, in girls under 2 years of age, the colon bacilli are frequently found in the urethra

---

[131] Smith, R M Pyelitis of Infancy, Am Jour Dis Child, September 1916, p 235

[132] Alsberg Arch f Gynäck, 1910, **90**, 255

[133] Beeler Carol, and Helmholz, H F The Bacteriology of the Urine in Healthy Children and Those Suffering from Extra-Urinary Infections Am Jour Dis Child October, 1916, p 345

The symptoms of a pyelitis in a child are well described by Smith,[134] who states that the infection begins in a child with a chill and fever which is relapsing or remittent He finds that a chill occurring in an infant under 2 years of age is very suggestive of this disease

The nervous phenomena occurring in the beginning of this infection may even suggest a meningitis There is apt to be frequent and painful micturition, but perhaps no other genito-urinary signs Sometimes the patient is very pale and the abdomen tender, or a kidney region may be tender, while often the spleen is enlarged There may be joint tenderness and herpes With recurrences of fever there may be vomiting, and even coma may occur The urine may show pus, or it may be clear if the ureter is blocked by the pus, hence every urinary excretion must be caught and examined in order to make the diagnosis, as the purulent urine is apt to be intermittent There may be albumin in the urine

Smith says that the prognosis is generally good, that the disease is rarely fatal The acute symptoms, however, may last several weeks, and the recovery may be protracted, or the infection may persist, or recurrences may take place for years Later the bladder may become infected, and there may be abscesses in the kidney structure There may be a history of sore throat or some intestinal upset occurring immediately before this infection

The treatment consists in locating, and removing if possible, the causative infection Purgatives should be given and colon washings are often advisable A liberal amount of water should be given the patient, so as to encourage a free outflow of pus Alkalies, such as potassium citrate, are advisable, given in the dose and frequency sufficient to alkalize the urine As cautioned with adults, the urine should not be made alkaline for too long a time, or, if it is found alkaline (which is rare), it should be made acid Hexamethylenamin in proper dosage for the age of the patient may be tried as it will sometimes be found of advantage, although it often fails, especially in colon infection Vaccines may be tried if deemed advisable and if the disease is protracted, surgical measures may be necessary

HEMATOGENOUS INFECTION OF THE KIDNEYS

In 1906, Brewer[135] first described this condition as a distinct pathologic entity In a series of subsequent communications he has clarified the understanding of this not infrequent condition, and shown the best treatment for it One of his latest papers[136] brings the subject nearly up to date

Pathologically, the local lesion is caused by the plugging of one or more blood vessels, with groups of organisms acting as emboli Inflammatory and protective processes begin around this infarct, and the center becomes a minute abscess Several of these plugs and subsequent abscesses may run together and form larger abscesses, or a plug of a larger arteriole may cause a large section of the kidney to break down at once If the condition is neglected, these larger abscesses may not break into the urinary tubules or into the kidney pelvis and be thus evacuated, but may rupture the kidney capsule and form a perinephritic abscess

The origin of these localized kidney infections may be a serious infective process or some simple infection, such as a boil, a carbuncle, tonsillitis, a tooth or sinus infection, or an infected wound The infarcts in the kidneys may be bilateral, but are frequently unilateral

Brewer recognizes three types of hemic kidney infection The first is the serious and fulminating type, which is rare In this form there are symptoms of acute general infection, with the kidney signs very hazy, and death may occur almost without a kidney symptom However, when both kidneys are affected there may be total suppression of urine, rapid prostration, and death will result from sepsis and uremia When only one kidney is thus seriously attacked, death is due to sepsis

The second type is serious, but does not become acute as rapidly, however, the prognosis is bad, although the disease reaches a fatal issue more slowly In this type the progress is so rapid and the local signs may be so few that the whole kidney may be destroyed before a diagnosis has been made, while the function of the other kidney also may become impaired

The third is a milder type in which the condition occurs and the patient recovers often without a diagnosis This type of mild infection frequently accounts for slight unexplained rises of temperature, followed after some weeks by an unaccountable pyelitis

This disease or kidney infection may not begin with a chill, unless it is of the severer type, but the temperature may rise to 103 or 105, with a pulse rate of 120 The toxemia is severe, and the general condition of the patient may resemble a severe hidden or central pneumonia Soon he complains of vague pains in the abdomen or in the flank on the affected side If the right kidney is affected, the symptoms and signs may resemble an acute appendicitis or an acute gallbladder infection, and from these conditions it may be difficult to make a differential diagnosis The affected kidney may secrete but little urine, while the other kidney may secrete freely, or even more urine than normal Careful examination of the urine, however, may show traces of albumin, blood and pus, and in doubtful conditions the ureters should be catheterized Brewer considers the presence of a decided unilateral costovertebral tenderness a pathogenic sign In these acute cases he believes the only safe treatment is immediate nephrectomy

The milder forms of this infection, which are more frequent, often resemble appendicitis, cholecystitis, or abscess of the liver

If the disease is not recognized and not surgically treated, it progresses to the formation of large abscesses, as just stated, and even to pyonephrosis These abscesses are smaller and fewer than occur in the acute or fulminating type, and cutting down on the kidney, stripping the capsule, and opening and draining the cortical abscesses may often save the kidney A neglected case may require complete nephrectomy When a diagnosis has been made the treatment is rest, plenty of water, and hexamethylenamin

Brewer believes the reason this disease is so generally unilateral is that a well kidney may throw off such an infection, while a kidney which has had some previous lesion or disturbance, or a kidney that is loose or mobile, is more susceptible to infection He has isolated the *Bacillus coli*, the *Streptococcus*

---

[134] Smith R. M Recent Contributions to the Study of Pyelitis in Infancy Am. Jour Dis Child March 1913 p 273

[135] Brewer Surgery Gynec. and Obst May 1906 p. 485

[136] Brewer New York Med. Jour March 20 1915, p 556

pyogenes, the *Staphylococcus pyogenes-aureus* and the *Bacillus typhosus* in these cases He has come to the conclusion that hematogenous infection is doubtless the cause of the greater number of renal sepsis cases

TUBERCULOSIS OF THE KIDNEY

The kidney is not an infrequent location of this disease, unfortunately, however, often the disease is not discovered until a septic infection has been added to the primary condition, that is, pyelitis has occurred It occurs most frequently at the age when general tuberculosis occurs, namely, from adolescence to 35 or 40 years of age In the beginning the disease is probably always unilateral, and ordinarily the other kidney seldom becomes involved, unless the patient has been seriously neglected This disease of the kidney is often secondary but frequently it is a primary infection, hence the urgency of early diagnosis and its eradication lest the disease generalize and affect other parts of the body

The pathology is that of tuberculous lesions — first small points of infection, then nodules, later destruction, and finally abscess formation The pathologic findings seem to show that while certain lesions may be evacuated and become cured, or may heal as do tuberculous deposits in the lungs, still other parts of the kidney show continued tuberculous degeneration In other words, there is no proof that a tuberculous kidney ever becomes permanently or safely healed, consequently, the only treatment, after the diagnosis has once been made, is nephrectomy

Probably the involvement of the ureter or of the bladder is always secondary, and such infection would not have occurred had the diagnosis been made early

The usual symptoms are pain, not always a factor, as there may be only a sense of discomfort in the abdomen, more noticeable on the affected side, backache, a frequent desire to urinate, and as the disease progresses, usually a slight amount of blood in the urine, or a real hematuria Soon pus appears

As these symptoms progress, there is generally afternoon or evening fever, possibly night sweats, loss of appetite, loss of weight, and general debility Varying amounts of albumin and casts are usually found in the urine There may be occasional attacks of colic caused by obstruction of the ureter with pus or debris, with the usual symptoms of rise in temperature, pain, possibly vomiting and chills, and later evacuation of urine that is loaded with pus

Blood or pus in the urine, as repeatedly stated in this discussion, necessitates examinations to determine the source The frequency of tuberculosis of the kidney should cause one to suspect this disease when pus or blood, or both, appear in the urine Physical examination may readily show which kidney is affected Carefully cleansing the genitals of all smegma, centrifuging the sediment of the suspected urine, and staining for tubercle bacilli will frequently reveal the germ, if it is present Or, the urine obtained by a catheter passed into the ureter of the involved kidney may be thus treated Failure to find tubercle bacilli by these methods does not prove that the disease is not tuberculosis The guinea-pig test with the sedimented, centrifuged urine is apparently reliable, and the number of weeks necessary for such a test to give a positive or negative result may be shortened by exposing the injected animal to the Roentgen ray, as has been shown by Murphy and Ellis[137] and by Morton[138] Observation of the temperature of the patient for several days will aid in deciding whether or not the kidney is tuberculous

If the kidney is tuberculous, there is no effective treatment except nephrectomy, and the ureter, if infected, should be removed as low down as possible Tubercle bacilli may continue to appear in the urine from an infected ureter or infected bladder for weeks or even months after the operation, but they generally disappear Of course if the other kidney is diseased, the operation would not be advisable, but, as stated, the two kidneys are rarely affected with tuberculosis at the same time After the operation the remaining kidney slowly hypertrophies, and within several months is able to carry on the ordinary functions of both kidneys

When the offending organ has been removed the patient should for a long time be treated as though affected with pulmonary or general tuberculosis This means rest, fresh air, good food, the prevention of such exertion as will cause fever or loss of weight, and such exercise or overfeeding as will overtax the kidney before it is able to do its double work He also generally requires iron for some time Vesical irritability may be relieved by alkalies, if the urine is acid If there is considerable infection of the bladder, it may be carefully washed out for a time Phenyl salicylate may be given in small doses, hexamethylenamin, if used, should be given in small doses, as great care is necessary in administering any drug which tends to irritate the remaining kidney

MALIGNANT TUMOR OF THE KIDNEY

The cardinal symptoms of cancer and sarcoma of the kidney are pain, blood in the urine, and palpable enlargement of the kidney The pain may be local, or may be referred to different parts of the abdomen, to the back, to the epigastrium, or downward If the right kidney is involved, the disturbance must be dissociated from a gallbladder infection The pain may be dull, boring, or burning in character In occasional cases there is no pain except that of the dragging of the tumor, which may be alleviated by a support of the abdomen and the tumor Sometimes there are shooting nerve pains like an intercostal abdominal neuralgia or neuritis

In the majority of cases, blood is found in the urine, and by the time the patient seeks help, there is generally a tumor mass A tumor in the kidney region may be of some other organ than the kidney, it may have displaced a kidney, or it may be an abnormally large kidney from hydronephrosis or pyonephrosis The centrifuged urine will generally show not only blood, but also pus and cells of broken down tissue, often characteristic of the growth With a demonstrable tumor and the urine showing this pathologic condition, the affected kidney is clearly revealed Of course, catheterization of the ureters not only will give more concentrated pathologic findings in the urine, but also will show the condition of the other kidney

The general condition of the patient is an important indication of the gravity of the lesion There may be secondary disturbances, weakness, anemia, emaciation, and gastro-intestinal abnormalities

Braasch[139] finds that renal growths are more frequent in men than in women

---

[137] Murphy and Ellis Jour Exper Med, 1914, **20**, 397

[138] Morton Jour Exper Med, 1916 **24**, 419

[139] Braasch, W F Clinical Data on Malignant Renal Tu
The Journal A M A, Jan 25, 1913, p 274

Renal function tests and blood tests should always be made and the efficiency of the other kidney determined before a nephrectomy is done, pyelography is occasionally necessary.

Whether or not life will be prolonged by nephrectomy depends on how far the case has progressed. As so often repeated, every bleeding into the urine should be investigated in order that an early diagnosis of a kidney growth may be made before an operation is of no avail. While cancer of the kidney may be primary, in the majority of cases it is secondary.

Carcinoma of the kidney causes a great deal more pain than does tuberculosis, and the progress of the disease is much more rapid, although, as stated above, it is sometimes devoid of pain. Colicky pains may occur when small clumps of degenerated tissue or blood clots pass down the ureter.

Sarcoma of the kidney is perhaps more frequent than carcinoma, and the progress to a fatal issue more rapid. Like carcinoma or sarcoma in any other part of the body, and perhaps particularly when affecting the kidney, on account of late discovery, recurrence of these growths after nephrectomy is frequent.

HYPERNEPHROMA

This growth of the kidney is more frequent than has been recognized. It has a tendency to cause metastases and although often accompanied by pain, profuse bleeding may be the only symptom. Generally there is a palpable tumor. When cystoscopy reveals hemorrhage and enlargement of one kidney, when there is no pus in the urine, and no symptomatic or roentgenographic evidence of stone, hypernephroma or some other malignant growth should be diagnosed, and an early operation is necessary to avoid metastases and recurrence of the growth.

CYSTIC DISEASE OF THE KIDNEY

In this condition there are multiple cysts in the kidney structure, and one or both kidneys may be involved. The symptoms are enlargement, recurrent pains, and more or less profuse hematuria. Sometimes these patients live for many years and endure well the loss of blood, others quickly become anemic, still others develop serious insufficiency of the kidneys. Surgical cure, even when only one kidney is involved, cannot be promised, as the mortality is great, and when both kidneys are involved, surgical interference should probably not be attempted.

Congenital small cysts may occur on the kidneys, and perhaps cause no symptoms for a long time. However, these nodular kidneys increase in size and become tumor masses, and sooner or later the kidney structure becomes involved, resulting in kidney insufficiency.

(To be concluded)

The Growth of Filtration Systems.—It is an interesting fact that a very large number of cities which formerly used water without purification now have water-works filtration plants. In 1900 less than 2 000 000 people were using filtered water, in 1910 approximately 10 000 000 were using it, while at the present date about 20,000,000 people are served by filtration plants. In 1900 fifty cities were using filtered water, and in 1917 there were 781 cities thus supplied, a truly remarkable increase. Reliable data pertaining to typhoid show that the death rate has decreased at about the same proportion as filtered water has increased. This alone is sufficient reason for the rapid adoption of filtration plants by municipalities.—*The American City*, June 1917.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

BETANAPHTHOL BENZOATE (See N. N. R., 1917, p. 197).

Betanaphthol Benzoate-Anthony-Hammond Chemical Works, Inc.—A non proprietary brand complying with standards for betanaphthol benzoate.

Manufactured by Anthony Hammond Chemical Works, Inc., New York City.

CALCIUM CACODYLATE—*Calcii Cacodylas*.—A calcium salt of cacodylic acid containing from 43.5 to 48 per cent of arsenic in the form of cacodylic acid and free from arsenite, arsenate and monomethylarsenate.

Actions and Uses.—Calcium cacodylate has the mild arsenic action of cacodylates. Its action is essentially the same as that of sodium cacodylate but it is preferred by some.

Dosage.—0.045 Gm. (¾ grain), repeated if necessary, at twenty-four hour intervals.

Ampules Calcium Cacodylate Solution Mulford.—Each ampule contains calcium cacodylate 0.045 Gm. (¾ grain) in 1 Cc. sterile physiological sodium chloride solution.

The calcium cacodylate used in the preparation of these ampules complies to the following tests:

No turbidity is produced in 10 Cc. of an aqueous solution of the salt (1:20) by 1 Cc. of calcium chloride test solution either in the cold or upon heating (*monomethylarsenate*). No yellow precipitate is produced in an aqueous solution of the salt (1:20) by ammonium molybdate test solution nor is a yellow precipitate produced by sodium thiosulphate test solution, nor is a yellow precipitate produced by hydrogen sulphide test solution. No white precipitate is produced in an aqueous solution of the salt after acidulating with hydrochloric acid by barium chloride test solution.

Dissolve 1 to 2 Gm. calcium cacodylate accurately weighed in 25 Cc. distilled water, then titrate with normal hydrochloric acid volumetric solution using methyl orange as indicator. Each gram of calcium cacodylate requires not less than 4.3 Cc. nor more than 5.6 Cc. of normal acid. If to the finished titration phenolphthalein solution is added 5.8 to 6.4 Cc. of normal volumetric potassium hydroxide is required to produce a red color for each gram of calcium cacodylate showing not less than 43.5 per cent nor more than 48.0 per cent arsenic (As). Theoretically calcium cacodylate, $Ca[(CH_3)AsO.O]$, contains 47.7 per cent arsenic.

Prepared by H. K. Mulford Company, Philadelphia.

Calcium Cacodylate occurs as a white, granular powder, almost odorless or having a slight odor of hydrogen arsenide. It is very soluble in water.

Calcium cacodylate loses about 8.5 per cent of its weight when dried at 100 C.

The aqueous solution of calcium cacodylate is alkaline to litmus, but acid to phenolphthalein.

With silver nitrate test solution an aqueous solution of the salt (1:20) yields a white precipitate soluble in nitric acid or ammonia water.

A mixture of 1 Cc. of an aqueous solution (1:100) of the salt with 10 Cc. of hypophosphorous acid develops the disgusting odor of cacodyl (caution on account of the extreme poisonous nature of the gas).

CHLORAZENE (See N. N. R., 1917, p. 140).

The following dosage form has been accepted:

Chlorazene Surgical Cream.—It contains chlorazene 1 Gm. in 100 Gm. of a base composed approximately of sodium stearate 15 per cent and water 85 per cent.

BORCHERDT'S MALT EXTRACT WITH COD LIVER OIL.—A liquid stated to be composed of cod liver oil 20 per cent and Borcherdt's Malt Extract Plain, 80 per cent.

(Accepted for inclusion with the appendix to New and Nonofficial Remedies.)

Prepared by the Borcherdt Malt Extract Co., Chicago.

BORCHERDT'S MALT EXTRACT WITH CREOSOTE.—Each 100 Cc. is stated to contain beechwood creosote 0.83 Cc. (4 minims per fluidounce) in Borcherdt's Malt Extract Plain.

(Accepted for inclusion with the appendix to New and Nonofficial Remedies.)

Prepared by the Borcherdt Malt Extract Co., Chicago.

BORCHERDT'S MALT EXTRACT WITH CASCARA SAGRADA.—Each 100 Cc. is stated to represent cascara sagrada 12.5 Gm. (60 grains per fluidounce) in Borcherdt's Malt Extract Plain.

(Accepted for inclusion with the appendix to New and Nonofficial Remedies.)

Prepared by the Borcherdt Malt Extract Co., Chicago.

pyogenes, the *Staphylococcus pyogenes-aureus* and the *Bacillus typhosus* in these cases He has come to the conclusion that hematogenous infection is doubtless the cause of the greater number of renal sepsis cases

TUBERCULOSIS OF THE KIDNEY

The kidney is not an infrequent location of this disease, unfortunately, however, often the disease is not discovered until a septic infection has been added to the primary condition, that is, pyelitis has occurred It occurs most frequently at the age when general tuberculosis occurs, namely, from adolescence to 35 or 40 years of age In the beginning the disease is probably always unilateral, and ordinarily the other kidney seldom becomes involved, unless the patient has been seriously neglected This disease of the kidney is often secondary but frequently it is a primary infection, hence the urgency of early diagnosis and its eradication lest the disease generalize and affect other parts of the body

The pathology is that of tuberculous lesions — first small points of infection, then nodules, later destruction, and finally abscess formation The pathologic findings seem to show that while certain lesions may be evacuated and become cured, or may heal as do tuberculous deposits in the lungs, still other parts of the kidney show continued tuberculous degeneration In other words, there is no proof that a tuberculous kidney ever becomes permanently or safely healed, consequently, the only treatment, after the diagnosis has once been made, is nephrectomy

Probably the involvement of the ureter or of the bladder is always secondary, and such infection would not have occurred had the diagnosis been made early

The usual symptoms are pain, not always a factor, as there may be only a sense of discomfort in the abdomen, more noticeable on the affected side, backache, a frequent desire to urinate, and as the disease progresses, usually a slight amount of blood in the urine, or a real hematuria Soon pus appears

As these symptoms progress, there is generally afternoon or evening fever, possibly night sweats, loss of appetite, loss of weight, and general debility Varying amounts of albumin and casts are usually found in the urine There may be occasional attacks of colic caused by obstruction of the ureter with pus or debris, with the usual symptoms of rise in temperature, pain, possibly vomiting and chills, and later evacuation of urine that is loaded with pus

Blood or pus in the urine, as repeatedly stated in this discussion, necessitates examinations to determine the source The frequency of tuberculosis of the kidney should cause one to suspect this disease when pus or blood, or both, appear in the urine Physical examination may readily show which kidney is affected Carefully cleansing the genitals of all smegma, centrifuging the sediment of the suspected urine, and staining for tubercle bacilli will frequently reveal the germ, if it is present Or, the urine obtained by a catheter passed into the ureter of the involved kidney may be thus treated Failure to find tubercle bacilli by these methods does not prove that the disease is not tuberculosis The guinea-pig test with the sedimented, centrifuged urine is apparently reliable, and the number of weeks necessary for such a test to give a positive or negative result may be shortened by exposing the injected animal to the Roentgen ray, as has been shown by Murphy and Ellis[137] and by Morton[138] Observation of the temperature of the patient for several days will aid in deciding whether or not the kidney is tuberculous

If the kidney is tuberculous, there is no effective treatment except nephrectomy, and the ureter, if infected, should be removed as low down as possible Tubercle bacilli may continue to appear in the urine from an infected ureter or infected bladder for weeks or even months after the operation, but they generally disappear Of course if the other kidney is diseased, the operation would not be advisable, but, as stated, the two kidneys are rarely affected with tuberculosis at the same time After the operation the remaining kidney slowly hypertrophies, and within several months is able to carry on the ordinary functions of both kidneys

When the offending organ has been removed the patient should for a long time be treated as though affected with pulmonary or general tuberculosis This means rest, fresh air, good food, the prevention of such exertion as will cause fever or loss of weight, and such exercise or overfeeding as will overtax the kidney before it is able to do its double work He also generally requires iron for some time Vesical irritability may be relieved by alkalies, if the urine is acid If there is considerable infection of the bladder, it may be carefully washed out for a time Phenyl salicylate may be given in small doses, hexamethylenamin, if used, should be given in small doses, as great care is necessary in administering any drug which tends to irritate the remaining kidney

MALIGNANT TUMOR OF THE KIDNEY

The cardinal symptoms of cancer and sarcoma of the kidney are pain, blood in the urine, and palpable enlargement of the kidney The pain may be local, or may be referred to different parts of the abdomen, to the back, to the epigastrium, or downward If the right kidney is involved, the disturbance must be dissociated from a gallbladder infection The pain may be dull, boring, or burning in character In occasional cases there is no pain except that of the dragging of the tumor, which may be alleviated by a support of the abdomen and the tumor Sometimes there are shooting nerve pains like an intercostal abdominal neuralgia or neuritis

In the majority of cases, blood is found in the urine, and by the time the patient seeks help, there is generally a tumor mass A tumor in the kidney region may be of some other organ than the kidney, it may have displaced a kidney, or it may be an abnormally large kidney from hydronephrosis or pyonephrosis The centrifuged urine will generally show not only blood, but also pus and cells of broken down tissue, often characteristic of the growth With a demonstrable tumor and the urine showing this pathologic condition, the affected kidney is clearly revealed Of course, catheterization of the ureters not only will give more concentrated pathologic findings in the urine, but also will show the condition of the other kidney

The general condition of the patient is an important indication of the gravity of the lesion There may be secondary disturbances, weakness, anemia, emaciation, and gastro-intestinal abnormalities

Braasch[139] finds that renal growths are more frequent in men than in women there is increased tonic contraction with greater vigor of rhythmic movement This reciprocal relationship, working only in one direction which obviously facilitates the onward progress of the contents of the intestine, has been called the "law of the intestines" The bolus causes a reflex contraction of the muscle above it, and a reflex inhibition or dilatation below

---

[137] Murphy and Ellis Jour Exper Med, 1914, **20**, 397

[138] Morton Jour Exper Med, 1916, **24**, 419

[139] Braasch, W F Clinical Data on Malignant Renal T[illegible] The Journal A M A Jan 25 1913, p 274

Meltzer, who studied these phenomena long ago, designated these relations by the more general term of the law of contrary innervation He has long directed attention to the general principle that "impulses inhibiting the action of antagonists must be an integral part of any kind of movement in the animal body" Meltzer has also been active in indicating how a disturbance in the contrary innervation may become of pronounced pathogenic significance Thus he has defined intestinal and gastric colic as being due to a disturbance of the law of contrary innervation — namely, that the caudal end of the bowel remains contracted and stationary while the cephalic end contracts and progresses forward The volume between the two contracted limits becomes gradually smaller while the contents of this volume remain practically unchanged, hence the increasing tension which leads to the unbearable colicky pain

More recently Meltzer[1] has applied somewhat analogous considerations to problems in the diseases of the bile ducts and the gallbladder The latter is provided with muscular fibers, the contraction of which will free this storage organ of its fluid contents The papilla of Vater at the termination of the common bile duct is also provided with circular muscular fibers which can contract to close the orifice It is clear, says Meltzer, that the muscle fibers of the gallbladder and those of the papilla are antagonists Applying our knowledge of the mechanism of the urinary bladder, and more generally the law of contrary innervation, the physiologic mechanism of bile storage and bile discharge is quite simple During the storage the muscle fibers in the papilla are contracted and those of the gallbladder are inhibited, during the discharge, the gallbladder contracts and Oddi's muscle is relaxed, the bile has then no other way out but into the duodenum

What brings about, at suitable intervals, this well regulated alternating discharge and storage of the bile? Meltzer believes that the discharge of chyme into the duodenum provokes the performance of the reciprocal reflexes In his own words, it seems quite safely established that the physiologic discontinuous character of the flow of bile into the duodenum is regulated by a reflex mechanism, dominated by the law of contrary innervation, that the integrity of the gallbladder is an important part in this reflex mechanism, that the discharge of bile can be greatly curtailed by the absence or a restriction of the discharge of chyme from the stomach into the duodenum, and that the discharge of bile through the papilla of Vater into the duodenum is greatly enhanced by the presence in the lumen of the latter of peptone or albumoses

On this basis, pathologic stasis, as contrasted with physiologic storage of the bile, might arise from a variety of causes including the absence of sufficient chemical products of digestion to promote the normal functioning of the papillary reflex The assertion is even ventured that "the abstaining from taking proteins or partaking them infrequently or in minimum quantities may prove to be another factor in the pathogenesis of biliary diseases"

As a practical outcome it is suggested as advisable to partake of comparatively frequent meals, although they need not consist of large quantities, and that the meal shall contain foods which readily send peptone and albumoses into the duodenum The principle ought to be especially observed in infectious diseases during which the bile contains the causative organisms In typhoid, for instance, food should be administered every two hours, and the food should contain materials which may readily be converted into peptone and albumoses The frequent elimination of the bacteria-laden bile may be the means, Meltzer further states, of preventing the development of cholangeitis and cholelithiasis These suggestions lead us to interesting speculations, but our knowledge of the physiology of the biliary mechanism will need far more elucidation and extension before the "meatless days" of struggling Europe or other forms of a low protein regimen can be made clearly responsible for the incidence of biliary disease

THE FREQUENCY OF TUBERCULOUS INFECTION OF THE LUNGS

The old tradition that "every one has a little tuberculosis" was converted into a demonstrated fact not many years ago by careful anatomic studies In 1900, Naegeli in Zurich reported that he had found recognizable tuberculous lesions in 97 per cent of the bodies examined by him Although this statement did not at once receive universal acceptance, and much lower figures were reported by others, yet it is now generally recognized as being quite correct, other pathologists, especially Burkhardt, having obtained similar results Until recently we have lacked comparable investigations on the population of this country, where, in view of somewhat different living conditions, the incidence and behavior of tuberculosis might perhaps be different An interesting study of a relatively small number of bodies by Opie[1] in St Louis, however, has established the universality of tuberculous infection in that community Opie's material, while smaller in amount than that of the German observers, is of

---

[1] Meltzer S J The Disturbance of the Law of Contrary Innervation as a Pathogenetic Factor in the Diseases of the Bile Ducts and the Gallbladder Am. Jour Med Sc. 1917 153, 469

[1] Opie E L The Focal Pulmonary Tuberculosis of Children and Adults, Jour Exper Med 1917 25, 85

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET CHICAGO, ILL

Cable Address . . "Medic, Chicago"

Subscription price . Five dollars per annum in advance

Contributors, subscribers and readers will find important information on the second advertising page following the reading matter

SATURDAY, JUNE 23, 1917

THE EFFECT OF WAR ON DIETARY PREJUDICES

A recent number of THE JOURNAL[1] contained two items, presented primarily in the form of news, which are of more than passing interest because they show how unjustifiable prejudices may be overcome by the exigencies of the times It is announced that the legal restriction of the sale of skimmed milk in New York has been withdrawn The Wicks bill, which has already taken effect, provides that the prohibition contained in the law regulating the sale of adulterated milk shall not apply to skimmed milk, which is clean, pure, healthy, wholesome and unadulterated, except by skimming, if it is sold for and as skimmed milk This bill also stipulates that prohibitions against the sale of cheese made from adulterated milk or cream shall not apply to pure skim-cheese made from milk which is otherwise clean and pure except by skimming It was high time that the unjust and inadvisable exclusion of cream-free milk and food products made therefrom should cease to bear the authority of law There may have been a time when a drastic measure was called for to prevent the fraudulent sale of skimmed milk as an adulteration or substitution for whole milk But the restriction had long served to exclude from human use a wholesome and inexpensive food of exceptional nutritive merit

Aside from the fat contained in the separated cream, skimmed milk — more properly designated separator milk in view of the common creamery practices of today — contains all the foodstuffs of the milk and has no mean food value But its usefulness in the dietary must not be measured merely in term[illegible] the
calories The salts of the[illegible] the urine obtained by a
desirable calcium into the ureter of the involved kidney
along with t[illegible] treated Failure to find tubercle bacilli
demonstrated [illegible]thods does not prove that the disease is
formerly unsu[illegible]sis. The guinea-pig test with the sedi-
with the skimm[illegible]fuged urine is apparently reliable, and
as fresh and can[illegible] weeks necessary for such a test to
cleaner than, the [illegible]or negative result may be shortened
[illegible]injected animal to the Roentgen ray,
[illegible]n by Murphy and Ellis[137] and by

fraction For a variety of culinary purposes it answers as well as the fat-containing product It is as fortunate as it is sensible that so valuable a food product need no longer be relegated solely to the use of swine and poultry, or converted into putrescible wastes

The second item refers to the New York ordinance permitting the use of horse flesh as food As Commissioner Emerson expressed it, this has made it possible for many of the poor of New York to keep the soup-pot boiling during the past winter who otherwise could not have done so Why the musculature of the horse should be less wholesome than that of the cow, hog, sheep or hen has never been clear to an unbiased questioner Like the unfounded proscription of young veal,[2] the prejudice against horse flesh must at length yield to intelligent criticism No one would argue for any superiority of the food products referred to, but in times of scarcity, at least, it is folly to base the popularity or unpopularity of any item that may increase the dietary solely on inherited prejudices which, in ultimate analysis, are devoid of any known hygienic or physiologic justification

SPECULATIONS ON THE GENESIS OF SOME DISEASES OF THE BILIARY SYSTEM

Consideration will bring to mind various instances in which antagonistic mechanisms are concerned in the body If flexor and extensor muscles attached to the same movable structure were stimulated to contract simultaneously, the muscular efforts would usually result in a most unfortunate inability to execute the movement that was actually intended It is clear, therefore, that when two sets of muscles can act on a movable organ such as an eye or part of a limb in such a way that they would antagonize one another, some device must be available to prevent this conflict This is provided by the phenomena of inhibition whereby during the performance of a particular reflex movement the contractions of the muscles opposing this are inhibited Obviously the inhibition of the one group must proceed simultaneously with the excitation of the other group, to insure a well controlled and steady motion

To the English physiologist Sherrington above all is due our knowledge of what is frequently called the
[illegible] ocal relation of antagonistic muscles Something
give sort here referred to characterizes the behavior
urine, alimentary tract in more or less well marked
kidney from the lower part of the esophagus to the
The S In front of a part that is excited, as for exam-
indicatio distention produced by a mass of food in
secondary of the gastro-intestinal tube, a relaxation
and gastr hind the stimulating mass, on the contrary,
Braasch
quent in r

---

[1] Sale of Skimmed M[illegible] Exper Med, 1914, 20, 397
26, 1917, p 1565, Food Sup[illegible]

[illegible]Veal" Toxic, editorial, THE JOURNAL A M A, Mar [illegible]
138 Morton "Bob Veal," June 7, 1913, p 179[illegible], Immature Veal
139 Braasch, [illegible] 1916, p 820, Immature Veal and Hard Palate
THE JOURNAL A 1449

there is increased tonic contraction with greater vigor of rhythmic movement This reciprocal relationship, working only in one direction which obviously facilitates the onward progress of the contents of the intestine, has been called the "law of the intestines" The bolus causes a reflex contraction of the muscle above it, and a reflex inhibition or dilatation below

Meltzer, who studied these phenomena long ago, designated these relations by the more general term of the law of contrary innervation He has long directed attention to the general principle that "impulses inhibiting the action of antagonists must be an integral part of any kind of movement in the animal body" Meltzer has also been active in indicating how a disturbance in the contrary innervation may become of pronounced pathogenic significance Thus he has defined intestinal and gastric colic as being due to a disturbance of the law of contrary innervation — namely, that the caudal end of the bowel remains contracted and stationary while the cephalic end contracts and progresses forward The volume between the two contracted limits becomes gradually smaller while the contents of this volume remain practically unchanged, hence the increasing tension which leads to the unbearable colicky pain

More recently Meltzer[1] has applied somewhat analogous considerations to problems in the diseases of the bile ducts and the gallbladder The latter is provided with muscular fibers, the contraction of which will free this storage organ of its fluid contents The papilla of Vater at the termination of the common bile duct is also provided with circular muscular fibers which can contract to close the orifice It is clear, says Meltzer, that the muscle fibers of the gallbladder and those of the papilla are antagonists Applying our knowledge of the mechanism of the urinary bladder, and more generally the law of contrary innervation, the physiologic mechanism of bile storage and bile discharge is quite simple During the storage the muscle fibers in the papilla are contracted and those of the gallbladder are inhibited, during the discharge, the gallbladder contracts and Oddi's muscle is relaxed, the bile has then no other way out but into the duodenum

What brings about, at suitable intervals, this well regulated alternating discharge and storage of the bile? Meltzer believes that the discharge of chyme into the duodenum provokes the performance of the reciprocal reflexes In his own words, it seems quite safely established that the physiologic discontinuous character of the flow of bile into the duodenum is regulated by a reflex mechanism, dominated by the law of contrary innervation, that the integrity of the gallbladder is an important part in this reflex mechanism, that the discharge of bile can be greatly curtailed by the absence or a restriction of the discharge of chyme from the stomach into the duodenum, and that the discharge of bile through the papilla of Vater into the duodenum is greatly enhanced by the presence in the lumen of the latter of peptone or albumoses

On this basis, pathologic stasis, as contrasted with physiologic storage of the bile, might arise from a variety of causes including the absence of sufficient chemical products of digestion to promote the normal functioning of the papillary reflex The assertion is even ventured that "the abstaining from taking proteins or partaking them infrequently or in minimum quantities may prove to be another factor in the pathogenesis of biliary diseases"

As a practical outcome it is suggested as advisable to partake of comparatively frequent meals, although they need not consist of large quantities, and that the meal shall contain foods which readily send peptone and albumoses into the duodenum The principle ought to be especially observed in infectious diseases during which the bile contains the causative organisms In typhoid, for instance, food should be administered every two hours, and the food should contain materials which may readily be converted into peptone and albumoses The frequent elimination of the bacteria-laden bile may be the means, Meltzer further states, of preventing the development of cholangeitis and cholelithiasis These suggestions lead us to interesting speculations, but our knowledge of the physiology of the biliary mechanism will need far more elucidation and extension before the "meatless days" of struggling Europe or other forms of a low protein regimen can be made clearly responsible for the incidence of biliary disease

THE FREQUENCY OF TUBERCULOUS INFECTION OF THE LUNGS

The old tradition that "every one has a little tuberculosis" was converted into a demonstrated fact not many years ago by careful anatomic studies In 1900, Naegeli in Zurich reported that he had found recognizable tuberculous lesions in 97 per cent of the bodies examined by him Although this statement did not at once receive universal acceptance, ients much lower figures were reported by others, Even when generally recognized as being quite corr nished over ologists, especially Burkhardt, having o not increased results Until recently we have lacked the blood investigations on the population of this coun s to range in view of somewhat different living con sually, however,
incidence and behavior of tuber osis m riations
be different An interes y of ing of
small number s b St
has establis n t
tion in th y t C
in amo

---

[1] Meltzer S J The Disturbance of the Law of Contrary Innervation as a Pathogenetic Factor in the Diseases of the Bile Ducts and the Gallbladder Am Jour Med Sc 1917 **153**, 469

1 Be ospli
Adult A ur lciu

particular value, because, by making roentgenograms of the lungs under examination, lesions were located much better than they can be by unaided dissection

As pointed out by Ghon in his important monograph on pulmonary tuberculosis in children, the lesions in the lungs during the first few years of life may occur in any part of the lung, and usually are accompanied by involvement of the lymph glands that receive the drainage from this area, this lymphatic tuberculosis usually being extensive and often dominating the tuberculous process In ninety-three children under 18 years of age, Opie found that eleven children had died of tuberculosis, and that of the remaining eighty-two children dead from other causes, eleven showed tuberculous lesions The nonfatal tuberculous lesions were found only in children over 2 years of age, and increased in proportion as age advanced, that is, of the children from 2 to 5 years of age, 27 per cent showed nonfatal tuberculosis, those from 5 to 10 years old showed 33 per cent incidence, and those from 10 to 18 years old, 62 5 per cent Of fifty adults, however, every one showed recognizable tuberculous lesions In the adults, however, two distinct types of tuberculous lesions were recognized One type, consisting of encapsulated caseous or calcified tubercles, with a correspondingly late type of lesions in the nearest lymph glands, seems to represent unquestionably healed or latent childhood infections The other type is the familiar apical lesion, tending to spread diffusely through the apex and unaccompanied by caseation or calcification of the regional lymphatic nodes, this lesion may heal completely, progress to a fatal termination, or remain in a latent condition The apical type of pulmonary lesion is not found in young children, but increases in frequency with age In many adult bodies, both types of lesions are found

From these observations the prevailing opinion that our resistance to tuberculous infection during adult life is due to a more or less complete immunization through infections received and overcome in youth receives strong support It is seen that tuberculosis infection, active, latent or healed, is practically always present in adults, and that, in adults, reinfections take on a different character from the infections of childhood In view of the person infected for the first time with day — contains, the lesion assumes the features seen has no mean animals inoculated with tubercle bacilli, dietary in tion spreads to the regional lymph glands calories I produces considerable caseation before it desirable ca by the development of a specific increase along with t In the adult, presumably because of the demonstrated this acquired partial immunity, the formerly unsu ally pursues a chronic course and does with the skimm lymph glands, this is a characteristic as fresh and can is in animals already tuberculous cleaner than, the first by Koch The healed tuber- in the lungs and peribronchial truly vaccination scars

---

1 Sale of Skimmed Mi
26, 1917, p 1565, Food Sup

THE PATENT LAWS AND PATENT OFFICE PRACTICE

The inequity of our patent laws, or possibly it would be more correct to say, of the interpretation of our patent laws, has been commented on many times in THE JOURNAL THE JOURNAL also has had occasion to call attention to patents that have been issued for obviously unscientific and quackish devices and preparations The cases of the preposterous gas-pipe fake "Oxydonor" and the creatinin mixture for the alleged conferring of immunity against diphtheria, pneumonia, scarlet fever, syphilis, tuberculosis, etc, are cases in point

In a patent issued the early part of this year for the "discovery" of a method of flavoring Epsom salt, the patent office has, in fatuity, piled Pelion on Ossa The "inventor" declares that his invention relates to a pharmaceutical preparation and a special method of treatment of the medicinal agents whereby said agent will be rendered much more efficient in character. He further avows that the "prime object" of his "invention" is to "disguise the normal taste and impart an agreeable odor or smell to salts commonly employed as a cathartic" Parenthetically it may be said that probably not a day passes that some physician in the United States does not do substantially the same thing when writing a prescription The "inventor" further claims that the object of his "invention" is to utilize the salts as a vehicle to carry an antiseptic and anesthetic agent whereby the salts when administered as a cathartic "will also act beneficially on the entire digestive tract" and "whereby cramped and spasmodic conditions are at once relieved with a resulting cure of flatulency, indigestion, sick and sour stomach, colic and the destruction of worms, etc"

Such claims are so absurd that the only excuse for commenting on them is the effect they have on the public mind The layman reading the specifications of this patent would naturally conclude that an invention of great importance had been made—of such importance as to warrant the government in rewarding its inventor by granting him a seventeen year monopoly on the sale of his invention

The law requires that, to be patentable, inventions shall be new and useful and shall show a higher degree of skill in their inception than is naturally to be expected from those who are skilled in the arts to which the inventions belong It has been decided again and again that physicians' prescriptions are not patentable because it is assumed that an educated physician will utilize his knowledge of pharmacy in devising proper compounds of medicines to meet the indications of disease When a physician prescribes a dose of Epsom salt to be taken in one of the official aromatic waters, he does not produce or create a new invention by so doing Of course, in one sense every prescription is an invention — an invention to meet the conditions presented by the patient — but such inventions are not patentable, because they represent the ordinary skill of a physician in carrying on his vocation

If the patent office goes on granting patents for such "inventions" as flavored Epsom salt, and it should be found financially profitable to secure such patents and place the products on the market, it will only be a matter of time before the materia medica will be so restricted that a physician will be unable to write a prescription without infringing somebody's patent

The splendid conception of the framers of our constitution in providing a plan for promoting progress in science and useful arts by granting to inventors for a limited time the exclusive use of their inventions, in exchange for the publication of full knowledge thereof, is being debased No branch of our government is of greater importance to the progress of the country than the patent office, provided that office is intelligently administered When the patent office is used, however, for an extension of the nostrum business, founded on the abuse of patent and trade-mark laws, it becomes a menace to the public health The objects of the patent law are being defeated by the practices of the patent office

THE CALCIUM CONTENT OF THE BLOOD

The increasingly numerous studies on the composition of the blood under varying conditions within both physiologic and pathologic ranges are serving to emphasize a rather remarkable constancy in the chemical make-up of the circulating fluid The older idea that elements in the blood were increased or diminished according to special circumstances has been largely discredited by the facts of experimental investigations There is no pronounced addition to the content of sugar in the blood when carbohydrate is ingested in abundance, nor is there, on the other hand, a disappearance of the sugar when the diet fails to include a supply of its sources On the contrary, an effective regulatory mechanism maintains a degree of fixity in the composition of the blood that insures a medium of nearly uniform character, aside from such slight alteration as local increments or withdrawals of substances may occasion before the device of adjustment has an opportunity to perform

The quoted instance of the blood sugar is in no sense an isolated illustration The maintenance of the neutrality of the blood, with its concomitant excretion of acid, is an example of this regulatory efficiency Indeed, as L J Henderson[1] has remarked, of all forms of organic regulation it probably is that which, quantitatively and in all its phases, we now most clearly understand There is also a striking regulation of the amount of water in the blood When large quantities of water are drunk, an increasing secretion of urine follows The blood is not noticeably diluted The increased secretion of urine is the expression of "the effort of the body to rid itself of unnecessary water"[2] The regulation of the proportion of water in the blood can be placed side by side as regards delicacy with the regulation of its reaction and components, its content of sugar, urea, salts and other substances

The element of regulation is an outstanding feature of biologic phenomena As Haldane has expressed it, the internal environment which is maintained so constant is but the expression of a balance between activities which disturb and activities which restore it A striking illustration of the degree to which this may be secured is afforded by recent investigations on the calcium of the blood Thus Meigs and Blatherwick[3] have found that the calcium content of cow's plasma is surprisingly constant It is somewhat over 0 11 per cent in very young heifer calves, and falls off gradually with increasing age until it reaches about 0 010 per cent toward the end of the first year, from which point it remains nearly constant Their results indicate that it is not appreciably altered by pregnancy, lactation, or by considerable changes in diet Their highest figure for plasma calcium has been 0 0114 per cent, and their lowest, 0 0086 per cent

To one not appreciative of the regulatory aspects of metabolism, these facts with respect to calcium might almost seem improbable because of the constant withdrawals of lime that must be made by pregnant animals that are building tissues rich in this element and by lactating individuals secreting a milk containing a liberal content of calcium But the remarkable constancy of blood calcium, found by Meigs and Blatherwick at times when the mobilization of calcium must be very great compared to the amount present in the bones, has been substantiated in other ways by the studies of Halverson, Mohler and Bergeim[4] at the Jefferson Medical College in Philadelphia on the calcium in the blood of human subjects in tuberculosis, as recently described in THE JOURNAL No marked deviations from the normal were observed in the calcium content of the serum of patients in the various stages of the pulmonary disease Even when a high milk diet, notably rich in lime, was furnished over long periods, the blood calcium values were not increased above normal The calcium content of the blood serum of normal human adults appears to range between 9 and 11 mg per hundred c c, usually, however, below 10 5 mg The maximum variatio observed in tuberculosis were from [illegible]4 to 11 mg calcium per hundred c c

---

[1] Henderson L. J The Excretion of Acid in Health and Disease The Harvey Lectures 1914 1915 Philadelphia J B Lippincott Company

[2] Haldane J S Organism and Environment 1917 p 79

[3] Meigs E B and Blatherwick N R Calcium and Phos in the Blood of Lactating Cows Proc Am Soc Biol Chem Jour Chem 1917 29, xi

[4] Halverson J O Mohler H K and Bergeim, Olaf Cal the Blood in Tuberculosis THE JOURNAL A. M A May 5 p 1309

From the Harvard laboratories likewise has come new evidence for this constancy of the calcium content of human blood In the great majority of subjects, according to Lyman,[5] the figures vary little Even in cases of advanced uremia, in which the total nitrogen was extremely high, the calcium was not increased On the other hand, the hemophiliac and the case of purpura hemorrhagica were not lower than what we may regard as normal The average for males was 6 1 mg of calcium per hundred c c of blood, while that for females was 7 1, a difference sufficiently great to stimulate further investigation

It is pertinent to inquire how this great nicety of regulation can be attained, particularly in cases in which there must at times be a deficiency in the intake of calcium A partial answer has been presented by Halverson, Mohler and Bergeim[1] The total blood of a 60 kg man contains about 0 3 gm of calcium The bones contain approximately 4,000 times as much These investigators add this significant comment With this great reserve supply of calcium, a portion of which is available, as is indicated by the great constancy of blood calcium under varying diets and conditions, a physiologic basis for the administration of calcium salts in tuberculosis has yet to be demonstrated

Current Comment

POLITICS ENDANGERS A GREAT UNIVERSITY

It is reported that Governor Ferguson of Texas has vetoed an appropriation of $1,600,000 voted by the legislature for the University of Texas for the next biennium including $197,500 for the medical department This seriously endangers the life of the institution According to reports, the governor sought the dismissal of the president and members of the faculty of the university On the refusal of the board of regents to dismiss these members, the attack was turned on that board Resignations of two members of the board were obtained, by methods not explained, and a third member was dismissed on a technicality The places of these three regents were filled by the governor's appointees, so that the majority of the regents are evidently subservient to his wishes A temporary injunction was obtained by the university authorities restraining the regents from dismissing the president or any members of the faculty Also suit was started on behalf of the state of Texas to restrain one of the newly appointed regents from acting or attempting to act as a member of the board in place of the dismissed member Being thus hindered in his efforts to have the president and faculty members discharged, the governor vetoed the university's appropriation An opinion from the attorney-general, however, gives hope that the veto will be ineffective, since the governor vetoed only certain items, but failed to include that portion of the act which contains the totals appropriated These procedures by the governor have thoroughly aroused the people of Texas, and mass meetings are being held at which the governor's actions are vigorously criticized The efforts by the governor of a great state to dictate the policies of a state university are to be deplored Political interference should not be permitted to lower the high ideals or to hamper the splendid work of the University of Texas and its medical department State universities should be beyond the control of politicians, especially those who are willing to sacrifice the good of the institution to satisfy their own selfish interests

RANK OF ARMY MEDICAL OFFICERS

The proposed amendment to Senate Bill 1786,[1] by Senator Owen, is of decided importance at the present time, and of personal interest to every medical man The amendment simply provides that there shall be the same rank in the Army as in the Navy Why medical officers in the Army should not have as high rank as similar officers in the Navy never has been explained There is no objection to the higher grades in the Navy, but there is no reason why like grades should not be given to medical officers in the Army In the line there is one general officer to every 170 commissioned officers, in the Medical Corps there is only one general officer, no matter how many commissioned officers there may be The regular army when fully manned will require over 2,000 medical officers, and yet unless the present law is modified there will be only one general — and he the Surgeon-General This is unjust — also unwise It is unwise because preventive medicine is of such tremendous importance so far as the Army is concerned, whether in time of war or in time of peace, that every encouragement should be given to the best trained medical men to offer their services At the present time when a young man is considering whether or not he will enter the Medical Corps of the Army as a life work he is confronted with the fact that no matter what diligence he may exercise, what skill he may possess, how faithful he may be, or how much good he may do, the highest rank he can receive, unless he should happen to be made Surgeon-General, is that of Colonel, paying but $5,000 a year And in the ordinary course of events he would be an old man before he reached this rank[2] That the Medical Corps is now having difficulty in filling its ranks is not to be wondered at Heretofore it has maintained a high standard Admission has been refused to inferior men, and those composing the Medical Corps are, therefore, of the highest personal character and professional ability But if this high standard is to be maintained there must be better inducements for high class men than are now offered It must not be forgotten that modern medicine has required a higher standard of medical education, and that civil practice offers greater inducements than has been the case in the past Every other *nation* is recognizing the fact that army medical officers should be given rank commensurate with their duties and the responsibilities they assume in carrying out the principles of preventive medicine As we stated at the beginning, the amendment offered by Senator Owen is most important and should be adopted It is so important that it is worth while for every physician who has any influence with his congressman or with his senator to use that influence in behalf of this amendment

---

[5] Lyman, H The Calcium Content of Human Blood, Jour Biol Chem, 1917, **30**, 1

[1] Page 1917, this issue

[2] According to the present law he must serve five years as lieutenant, and his promotion after that is correspondingly slow

---

THE RESPONSIBILITY FOR THE HEALTH OF OUR TROOPS

If epidemics develop among our troops in this war similar to those which occurred during the Spanish-American war and large fatalities result, the Medical Department of the Army will be criticized, at the same time, it may be as innocent as it was in 1898 Time and again medical officers at Chickamauga and other encampments made recommendations and suggested improvements in sanitary conditions, which, if carried out, would have prevented the terrible fatalities which occurred But the recommendations and suggestions were ignored by line officers Now it is reported that plans for some of the great cantonments for the half-million men who soon are to be taken from our citizenship were finished without consultation with the Surgeon-General's Office If this is true, let those responsible bear in mind that they, and not the Medical Corps, will be accountable for what may develop through neglecting to put in effect the fundamental principles of modern medicine and sanitary science in military camp construction These cantonments can be made as sanitary as was the Isthmus of Panama during the construction of the great canal But the same principles must be carried out in the one instance as in the other During the construction of the canal Colonel — now Surgeon-General — Gorgas had absolute control over sanitary arrangements and conditions So it should be in the building of these cantonments We rejoice to note, therefore, that among the amendments to the act now before the Senate "for making further and more effectual provision for the national defense" there is one offered by Senator Owen, which reads

> That the Surgeon-General of the United States Army shall be directly responsible to the Secretary of War for the sanitary condition of the troops camps and hospitals of the United States and it shall be unlawful to disregard his sanitary regulations and recommendations except on the ground of battle or other extraordinary emergency

Under such a provision the Medical Corps would be responsible to the Secretary of War — not to some line officer In the summer of 1898 when 20,000 of the men who enlisted to serve their country were sick, dying or dead of typhoid fever, the cry went up that the Medical Department was a failure Let it be repeated again and again If the Medical Department is to bear the blame and the criticisms for illness and deaths which may occur through failure to apply modern sanitary science, then give it authority now to use its special knowledge while there is yet time to apply that knowledge

Medical Mobilization and the War

Raising the Rank of Army Medical Corps Officers

The following was introduced, June 12, and referred to the Committee on Military Affairs

> Amendment intended to be proposed by Mr Owen, to the bill (S 1786) to amend certain sections of the Act entitled 'An Act for making further and more effectual provision for the national defense and for other purposes approved June third, nineteen hundred and sixteen and for other purposes, viz On page 7, after line 20, insert the following
>
> *Provided* That so much of the Act of Congress approved August twenty ninth, nineteen hundred and sixteen as provides for determining the number of officers authorized for the Medical Corps of the Navy and for the distribution of such officers in the various grades shall hereafter apply to the Medical Corps of the Army, except that the Army titles shall be substituted for Navy titles of corresponding grades in accordance with the relative rank fixed by law between officers of the Navy and officers of the Army, to wit One half of one per centum to be major generals of the senior and junior grades as fixed by the President four per centum colonels eight per centum lieutenant colonels and eighty seven and one half per centum distributed among the lower grades as in the Medical Corps of the Army as established by law

This of course applies to the regular Medical Corps When the regular army provided for in the act of June 3 1916, is fully manned with its 293 000 men, the Army Medical Corps will consist of about 2 000 medical officers If the above amendment is adopted it will provide for ten brigadier-generals eighty colonels and sixteen lieutenants At the present time there are twenty-one colonels and thirty-six lieutenant colonels but no brigadier-generals in active service (The surgeon-general is usually a brigadier-general General Gorgas however, was made major-general by special act of Congress in recognition of his services in connection with the Panama Canal) The following table gives the comparative ranks and the pay, of the Medical Corps of the army and navy

Navy Rank	Navy Pay	Army Rank	Army Pay
Lieut Junior Grade	$2 000	Lieutenant	$2 000
Lieutenant	2 400	Captain	2 400
Lieutenant commander	3 000	Major	3 000
Medical inspector rank of Commander	4 500	Lieut colonel	4 500
Medical director rank of Captain	5 000	Colonel	5 000
Medical director rank of rear admiral lower half	6 000	Brigadier general	6 000
Medical director rank of rear admiral upper half	8 000	Major general	
Vice admiral		Lieutenant general	
Admiral		General	

Medical Officers with General Pershing

On the staff of General Pershing the following men represent the medical department Col Alfred E. Bradley, chief surgeon is a New Yorker and has been an officer of the Medical Corps since 1888, Col M W Ireland, senior assistant surgeon, is from Indiana and entered the service in 1891, Major George Peed, second assistant, is from Virginia and was commissioned in 1899, Capt. Henry Beeuwkes is junior assistant surgeon He is from New York and has been in the army since 1909

Fatalities Among Physicians in the British Army

The *Official Bulletin*—the government's daily newspaper—for June 16 publishes an interview with Col T H Goodwin of the Royal Medical Corps of Great Britain flatly contradicting the story that "60 000 English doctors have lost their lives in the service." The total loss, Colonel Goodwin is quoted as saying is not 2 per cent. of that number, and that there are only 12 000 medical men in the British army

---

Special Neuropsychiatric Units

The National Committee for Mental Hygiene has created a subcommittee on furnishing hospital units for nervous and mental disorders to the United States government, the project having been approved by Surgeon-General Gorgas This subcommittee, of which Dr Pearce Bailey New Y[illegible] is chairman, is authorized to secure the services of [illegible] and neurologists to be commissioned in the M[illegible] Reserve Corps and to serve in the neuropsychiatric units which are to be attached to the base and other hospitals of the military services of the United States Further information will be given, and application forms sent to physicians qualified in this branch of medicine, on application by letter or in person to the National Committee for Mental Hygiene, 50 Union Square, New York City

Enlisting with Provisos

A physician asks 1 Can one enlist for service in the United States only? 2 Can one enlist for medical work only, not surgical? 3 Can a physician over 45 years, up to 55, enlist and be exempt from service at the field hospitals and firing line at his discretion? 4 What is the pay? 5 Is the pay the same for army and Red Cross work?

Answer —1 The physician who enlists for service with the Medical Department of the Army is expected to go where he is sent, whenever he is ordered At present only the younger men are being sent abroad 2 The physician in the Medical Corps does whatever work he is ordered to do The superior officers, however, are supposed to acquaint themselves with the officer's capabilities so that he will not be ordered to undertake work which he cannot do 3 See answer 1 4 The remuneration of medical officers is first lieutenant, $2 000 per annum, captain, $2,400, major, $3,000 and allowances 5 In time of war, the base hospital units formerly under the direction of the Red Cross pass into the control of the Medical Department of the Army, and the commissioned officers of these units receive pay according to the rank which they hold in the reserve corps

Mobilizing the Medical Reserve Corps

During the week ending June 16, there were recommended to the adjutant-general of the army for commissions in the Medical Reserve Corps, 1,032 medical officers, including ten majors, 117 captains and 905 lieutenants From April 21 to June 16, 4,026 physicians have been recommended for commissions

Requirements for the Nurse Corps

Miss Edith M Barrett, Thompsonville, Conn, requests information in regard to the requirements for the Nurse Corps of the Army

Answer —Candidates for the Nurse Corps must be graduates of hospital training schools for nurses and have passed a satisfactory professional and physical examination An applicant for a first appointment must be between 25 and 35 years of age and unmarried Application from states and territories where registration is required by law will be considered in the cases only of training schools which are acceptable to the state or territorial boards of registration The applicant must undergo a physical examination which will be made, when practicable, by a medical officer of the army The applicant must be not less than 60 inches nor more than 70 inches in height, and must weigh not less than 100 pounds nor more than 195 pounds Marked disproportion between height and weight is a cause of rejection No applicant is appointed unless she agrees to serve for three years All nurses in the Nurse Corps are appointed or removed by the surgeon-general of the army with the approval of the secretary of war

Qualifications Under the Draft

Dr Herman Cohen, Bronx, N Y, asks whether a physician can be drafted for services who (1) is 37 years old, (2) has a left inguinal hernia, an abdominal scar from a previous operation, and (3) flat feet?

Answer —1 The present draft law includes only men between the ages of 21 and 31 years 2 An inguinal hernia may be a cause for rejection Such a defect may ordinarily readily be corrected 3 Flat foot is a cause for rejection when accompanied by symptoms of weak feet Simple sinking of the arch of the foot is extremely common and unless attended with symptoms of weakness, is of no consequence The strength of the foot is tested by requiring the applicant to walk on his toes and to hop on the toes of each foot He should be able to rise on the tip toes strongly, to hop well, and to alight on the toes after springing from the ground Pronounced cases of flat foot, attended with marked eversion of the foot and marked bulging of the inner border due to inward rotation of the astragalus, are disqualifying regardless of the presence or absence of subjective symptoms

Report of the National Committee on Red Cross Medical Service

The following is the report of Col Jefferson R. Kean, M C, U S Army, director-general of military relief, at the meeting in the Academy of Medicine, New York, June 7

ARMY BASE HOSPITALS

The organization of army base hospitals has gone steadily forward, there being at this date thirty-eight organized, with three others to which a provisional authorization has been given provided the prescribed conditions can be met In all cases the first and basic requirement—that a base hospital in order to be authorized shall have behind it a parent institution, either a great hospital or a strong medical school—has been rigidly maintained The advantages of this requirement are each day more evident, since the staff of a hospital so organized is composed of men who are accustomed to work together and so selected with the full knowledge that the good name of the institution which they are to represent depends on the selection The parent institution can also be depended on to replace vacancies The effort to combine representatives of more than one hospital or school in a base hospital has been attended with failure Great pressure has been brought to bear to authorize distinguished individuals to organize base hospitals or hospital units about themselves as the connecting bond, but such offers have been steadily declined because the cohesion and value of the organization depend in this case on a single individual, who is usually somewhat advanced in years and whose loss from ill health or other causes would be apt to cause a disruption of the organization

The number of army base hospitals to be organized was, in March, fixed at thirty-six, but when it was determined to send six of these large units to France to assist our British Allies, it seemed advisable to replace those by additional organizations The surgeon-general has not been anxious to increase the number of base hospitals beyond the immediate and evident prospective needs of the army, because in the organization of each twenty-four medical men, fifty nurses, and a numerous subordinate personnel are tied up whose services might otherwise be used individually

Since the departure, in the first half of May, for the theater of war, of the six base hospitals above mentioned, four others have been placed under orders to be prepared for foreign service In the appended list of base hospitals those that have already sailed and those under orders are indicated

NAVY BASE HOSPITALS

Navy base hospitals to the number of five, which is as many as the Navy Department desired, have been organized at Brooklyn, Providence, Philadelphia, San Francisco and Los Angeles

The cost of the equipment of base hospitals has greatly increased during the year since the organization of the first of them began At that time it was fixed at $25,000 for each army base hospital, the money being furnished by the chapter in the city where the unit was organized or by private subscription At the present time the cost of the equipment is between $40,000 and $50,000, and many articles of equipment, such as blankets and instruments, can only be secured with a promise of delivery at a more or less indefinite future date. Fortunately, however, the purchase of the equipment of many of them was sufficiently advanced at the time when the occurrence of war became probable to make it possible to meet the demands which have occurred and will probably occur in the immediate future until such time as the government shall have accumulated an adequate supply of medical equipment.

HOSPITAL UNITS

These organizations consist of twelve medical men (divided equally between surgeons and internists), twenty nurses, and such number of orderlies and other subordinate personnel as may be authorized They are intended to supply the skilled professional personnel for camp hospitals and to reinforce the staff of other existing hospitals when necessary Therefore no effort is made to supply them with hospital equipment, but only the instruments which may be necessary for the practice of the various specialties of the staff The organization of these units was not undertaken until within the past three months Eighteen of them have been organized

AMBULANCE COMPANIES

Ambulance companies are intended for the transportation The of the sick and wounded and their care en route. Red organization approved by the War Department for the other Cross has a captain, four lieutenants and eighty-six of ranks Fifty ambulance companies have been organized The number and location of these are appended The companies are being mustered into the national service and furnished their military equipment and ambulances as rapidly as possible It is anticipated that ten of them will be ordered to foreign service in the near future

OTHER PROFESSIONAL PERSONNEL

During May the Red Cross was asked by the surgeon-general of the army to select for service abroad, with the British government, 112 physicians between the age of 25 and 35, and twenty one skilled orthopedic surgeons These, with the assistance of the members of the National Committee on Red Cross Medical Service and the state committees, were carefully selected and have already sailed

RED CROSS NURSES

Nurses are enrolled in the Red Cross Nursing Service only after very careful investigation of their training and professional records The enrolment is made through local committees in all the principal cities of the country These nurses are given also a physical examination and before being ordered into active service are required to be immunized against smallpox and typhoid fever Their standard is such as to satisfy the requirements for the army and navy nurse corps for which they constitute the officially recognized reserve.

In addition to the nurses attached to base hospitals and hospital units groups of ten under a chief nurse, have been organized throughout the country, called emergency detachments The members of these detachments are ready to respond to call within twenty-four hours and the detachments can therefore be used to meet pressing emergencies Larger detachments called naval detachments have been organized in areas surrounding the naval base hospitals and the permanent naval hospitals at home ports so as to permit a prompt expansion of the services of these hospitals in case of necessity

The number of nurses called into active service since the beginning of the war has been

Army	With base hospitals 389, otherwise, 26	415
Navy	In hospitals	65
		480

All the nurses sent to Europe have been completely equipped with uniform and personal equipment at the expense of the American Red Cross

STEAM YACHT SURF

The use of the steam yacht *Surf* has been given by its owner Dr John A. Harris who meets all expenses for the service of the Red Cross and has been assigned to the duty of collecting the sick from the patrol fleet within a certain area of the northeastern coast The *Surf* was placed in commission, May 27, by Medical Inspector I W Richards, U S Navy, assistant director general of military relief P A Surg J B Laughlin of the Public Health Service has been loaned by that service to take charge of the medical service

BUREAU OF INFORMATION OF CASUALTIES

A Red Cross bureau of information of casualties has been formed with W R Castle, Jr, as director The purpose of the new bureau is to get information of casualties to the families of men wounded, missing or taken prisoners and to act as a means of communication, through the International Red Cross between American prisoners in Germany and their families and between German prisoners in America and their families It is also to furnish lists of prisoners in America to the International Red Cross in Geneva, and to receive from it lists of Americans in German prison camps

The central office of the bureau will be in Washington, D C Here will be kept card catalogues of prisoners, and of all Americans killed wounded or missing

The head office for Europe will be established in Paris To this office will be sent all information collected in the field and by it transmitted promptly to the central office in Washington The Paris office will also receive reports from the International Red Cross in Geneva for transmission to Washington Representatives of the bureau will be stationed in all divisional headquarters for the purpose of gathering and codifying information These representatives will direct the work of their assistants in the field and at all the hospitals where facts as to killed and wounded will be established and all possible information gathered which may throw light on the fate of missing men The information so gathered will be codified and forwarded daily to the principal European office in Paris and by this office will be sent either by letter or cable to the central office in Washington

RED CROSS SUPPLY SERVICE

The Red Cross Supply Service has been organized as a bureau of the Department of Military Relief of the American Red Cross Briefly the purposes of this bureau are

1 To encourage the production and contribution of useful articles
2 To standardize the specifications
3 To collect inspect pack in suitable cases, and store these articles until needed
4 To distribute them in the right quantity in the right place at the right time

The central office of the Red Cross Supply Service is at Washington and eleven branches with warehouses have been established at the following stations Atlanta, Baltimore, Boston Chicago Denver, Minneapolis New Orleans, New York San Francisco St. Louis and Seattle These branches carry a stock of raw materials which is being sold to the chapters

AMERICAN RED CROSS ARMY BASE HOSPITALS AND DIRECTORS

No	Parent Institution	Location	Director	Address
1	Bellevue Hospital	New York	Dr Edw L Keyes	109 E. Thirty Fourth Street
†2	Presbyterian Hospital	New York	Dr George E. Brewer	16 E. Sixty Fourth Street
3	Mount Sinai Hospital	New York	Dr N E. Brill	Mt Sinai Hospital
†4	Lakeside Hospital	Cleveland	Dr George W Crile	1021 Prospect Street
†5	Harvard University	Boston	Dr Harvey Cushing	Peter Bent Brigham Hospital
*6	Massachusetts General Hospital	Boston	Dr F A Washburn	Massachusetts General Hospital
7	Boston City Hospital	Boston	Dr J J Dowling	Boston City Hospital
8	New York Post Graduate Hospital	New York	Dr Samuel Lloyd	12 W Fiftieth Street
9	New York Hospital	New York	Dr C L. Gibson	72 E Fifty Fourth Street
†10	Pennsylvania Hospital	Philadelphia	Dr R H Harte	1503 Spruce Street
11	St. Joseph St. Mary and Augustana Hospitals	Chicago	Dr A J Ochsner	2106 Sedgwick Street
†12	Northwestern University Medical School	Chicago	Dr F A Besley	104 S Michigan Avenue
13	Presbyterian and County Hospital	Chicago	Dr Dean D Lewis	122 S Michigan Avenue
14	St. Luke s and Michael Reese Hospitals	Chicago	Dr L. L. McArthur	122 S Michigan Avenue
*15	Roosevelt Hospital	New York	Dr Charles H Peck	30 W Fiftieth Street
16	German Hospital	New York	Dr Fred Kammerer	51 E Sixty Sixth Street
*17	Harper Hospital	Detroit	Dr Angus McLean	David Whitney Building
*18	Johns Hopkins Hospital	Baltimore	Dr John M T Finney	Johns Hopkins Hospital
19	Rochester General Hospital	Rochester	Dr John M Swan	457 Park Avenue
20	University Pennsylvania Hospital	Philadelphia	Dr John B Carnett	123 S Twentieth Street
†21	Washington University Medical School	St Louis	Dr Fred T Murphy	5738 Coates Avenue
22	Milwaukee County Hospital	Milwaukee	Dr C A Evans	809 Evans Building
23	Buffalo General Hospital	Buffalo	Dr Marshall Clinton	536 Franklin Street
24	Tulane University	New Orleans	Major John B Elliott	Maison Blanche Building
25	Cincinnati General Hospital	Cincinnati	Dr William Gillespie	670 June Street
26	State University of Minnesota	Minneapolis	Dr Arthur A. Law	420 Syndicate Building
27	University Pittsburgh Medical School	Pittsburgh	Dr R. T Miller	Diamond Bank Building
28	Christian Church Hospital	Kansas City	Dr J F Binnie	Rialto Building
29	City and County Hospital	Denver	Dr Henry Sewall	Majestic Building
30	University of California	San Francisco		
31	Youngstown Hospital	Youngstown	Dr Colin R Clark	415 Bryson Street
32	City Hospital	Indianapolis	Dr Edmund D Clark	1236 N New Jersey Street
33	Albany Hospital and Medical College	Albany	Dr A W Elting	119 Washington Avenue
34	Episcopal Hospital	Philadelphia	Dr A. P C. Ashhurst	811 Spruce Street
35	Good Samaritan Hospital	Los Angeles.	Dr J J A. Van Kaathoven	Grand Avenue and Seventh Street
36	College of Medicine	Detroit	Dr Burt R Shurly	32 W Adams Street
37	King's County Hospital	Brooklyn	Dr Edwin H. Fiske	132 LaFayette Street
38	Jefferson Medical College	Philadelphia	Dr W M L. Coplin	Jefferson Hospital

† Have sailed.

* Under orders to sail

at cost They will also carry a stock of comforts and necessities which may be drawn on by the troops in service

We shall appoint a representative to be stationed at each of the base hospitals, training camps and other posts of the army and navy This officer will carry a Red Cross commission and wear a uniform In each camp a small warehouse will be erected by the army for our use and supplies will be kept therein for distribution by our field representatives

The Red Cross Supply Service will also serve as a medium for purchasing supplies for use abroad and will attend to their transportation and distribution

The management of the supply service consists of a director, two associate directors and an advisory board, including a transportation expert, an engineer and a doctor of public health

RED CROSS AMBULANCE COMPANIES

No	Location	Captain	Ready for Service
1	Pasadena, Calif	Chas D Lockwood	Yes
2	Berkeley, Calif	Alvin Powell	No
3	Chicago	Elbert Clark	Yes
4	Cleveland	Ralph K Updegraff	Yes
5	Washington, D C	Ryan Devereux	Yes
6	Fordham, N Y	*Joseph Donnelly*	Yes
7	New York	Chester F S Whitney	Yes
8	Detroit	Charles Barton	Yes
9	Chicago	Stephen V Balderston	Yes
10	New York	Wm H Rockwell	Yes
11	Battle Creek, Mich	James T Case	Yes
12	Seattle	David C Hall	Yes
13	Pittsfield, Mass	Robert J Carpenter	Yes
14	Eugene, Ore	John E Kuykendall	No
15	Grand Rapids, Mich	Thos. D Gordon	No
16	Fredonia, Kan	Edgar C Duncan	No
17	Boston	Edward A Cunningham	Yes
18	Indianapolis	Mason B Light	No
19	Portland, Ore	Ernest H Streit	No
20	Atlanta, Ga	Leo P Daly	No
21	Flint, Mich	Walter H Winchester	No
22	Charleston, W Va	Timothy L Barber	No
23	Portland Maine	Ernest B Folsom	No
24	Kansas City, Mo	Ernest W Cavaness	No
25	Vermont	Wm Stickney	No
26	Columbia, S C	Marion H Wyman	Yes
27	Salt Lake City	Hugh B Sprague	No
28	Detroit	Griffith A Thomas	No
29	Atlanta, Ga	Walpole C Brewer	No
30	Denver	Thomas M Hopkins	No
31	Greensboro, N C	Charles S Lawrence	No
32	Greenville S C	James E Daniel	No
33	Summit, N J	William H Lawrence, Jr	No
34	Hudson County, N J	Frederick J Quigley	No
35	Buffalo	Not appointed	No
36	Houston, Texas	Claude C Cody	No
37	Minneapolis	Ralph Thomas Knight	No
38	San Antonio Texas	Not appointed	No
39	Memphis, Mich	George Waters	No
40	Fort Worth, Texas	Not appointed	No
41	Valparaiso, Ind	Not appointed	No
42	Des Moines Iowa	Not appointed	No
43	Vicksburg Miss	Not appointed	No
44	Topeka, Kan	Not appointed	No
45	Raleigh N C	Not appointed	No
46	Lock Haven, Pa	Not appointed	No
47	Tulsa, Okla	Not appointed	No
48	Oklahoma City	Not appointed	No
49	San Francisco	Not appointed	No
50	Danville, Ill	Not appointed	No

HOSPITAL UNITS

A Philadelphia Presbyterian Hospital.—Dr John H Jopson, 1824 Pine Street, Philadelphia

B Yonkers, N Y—Dr S E Getty, 84 Ashburton Avenue, Yonkers

C Spokane, Wash—Dr S E Lambert, Old National Bank Building Spokane

E Richmond (Va) Memorial Hospital—Dr Robert Bryon, Grace Hospital, Richmond

F New York City, Harlem Hospital—Dr Lewis K Neff, 1213 Park Avenue, New York

G Portland, Maine—Dr W L Cousins, 181 State Street, Portland, Maine

H New York City, Fordham Hospital—Dr Alex Nicoll, 119 W Eighty Eighth Street, New York

K Council Bluffs, Iowa—Dr Donald McRae, City National Bank Building

L Pittsburgh (Pa) Allegheny General Hospital—Dr B W Caldwell, *Allegheny* General Hospital, Pittsburgh

M Fort Wayne (Ind) Hope Hospital—Dr Miles F Porter, Physicians' Defense Building

N New York City, Flower Hospital—Dr R S Copeland, 58 Central Park West, New York

O Charlotte, N C—Dr Addison G Brenizer, Jr, Blandwood Apartment

P Memphis (Tenn) General Hospital—Dr Battle Malone, Exchange Building, Memphis, Tenn

Q Grand Rapids (Mich) Butterworth Blogett—Dr Richard R Smith, Metz Building, Grand Rapids, Mich

R Fairfield, Iowa—Dr M Fred Clarke, Fairfield, Iowa

S Nashville (Tenn) Vanderbilt University—Dr Richard A Barr, Eve Building, Nashville, Tenn

V Syracuse (N Y) General Hospital—Dr E S Van Duyn, Syracuse

Organization of Ambulance Companies

After consultation with representatives of the French and English governments, who recently visited this country, the War Department authorized the organization of an ambulance corps for service abroad at the earliest possible date This service is needed in the area behind the firing lines The equipment will consist of 2,000 Ford ambulances, 100 Packard 2-ton trucks, 100 Ford ¾-ton trucks, 100 Ford touring cars and 100 motor cycles, distributed among the 100 sections into which the corps is divided

It is proposed to organize the personnel of each section as follows one first sergeant, one sergeant, one corporal, two orderlies, two clerks, one chief mechanic, two mechanics, one cook, one assistant cook, twenty-four motor drivers—total 36

The corps will be constituted of members of the Medical Enlisted Reserve Corps of the United States Army and the officers will be selected from the Medical Reserve Corps Each section of thirty-six men will be commanded by a first lieutenant, five sections will be placed under a captain, and *twenty sections will be commanded* by a major

All enlistment papers read for four years, but the government has announced that enlistments made after war was declared are construed as for the period of the war only All enlistments are made in the grade of private and promotion is made on the recommendation of the section commander

The recently authorized schedule of pay runs from $30 for the private to $56 for the first sergeant—the usual allowances, clothing, rations, transportation and quarters, are in addition to the above.

Half the entire enlisted personnel will be supplied from colleges and universities One or more sections are recruited at Harvard, Yale, Princeton, Amherst, Williams, Massachusetts Institute of Technology, Dartmouth, Johns Hopkins, University of Virginia, University of Pennsylvania, Washington and Lee, Oberlin, Purdue, Indiana State, University of Illinois, Northwestern University, State University of Iowa, Hamline, Leland Stanford Jr, University of California, and many others The Stonemen's Fellowship of Philadelphia has furnished several sections, and several industrial organizations, such as the Packard Motor Company, have organized a section While no guarantee can be given that sections so organized will always be held intact by the government, the advantages incident to maintaining such organizations are recognized, and the probability is that they will be continued

Enlistments for this corps can be arranged for in most of the large cities of the United States After enlistment in the Medical Enlisted Reserve Corps, recruits may be called into active service and transported to the concentration camp at Allentown, Pa, at government expense The government bears no part of the applicant's expenses until he is called into active service

Only men of high grade—physically and morally—are desired for this particular service

Further information can be secured by addressing Major H C Coe, M R C, 251 West Eightieth Street, New York

Harvard Base Hospital Unit in Action

A special cable to the New York *Tribune* reports the following interview with a wounded American officer *in* London regarding the service of the Harvard Medical Unit

> The medical unit was originally informed that they were to have the care of 400 beds, and a staff was selected on that basis When they arrived in England they were informed that the hospital contained 1,000 beds, but when they reached France they discovered that there were 1,300 beds, with an expansion limit of 1,900
>
> After Messines the hospital was filled immediately to its utmost capacity *The American staff was only* adequate to deal with a quarter of the number of cases, but they worked like supermen, only appealing to the British units for extra assistance in doctors and nurses when it had become humanly impossible to deal with all the cases coming in
>
> British assistance was sent as soon as it was asked, and the major commanding the unit told me it was impossible for him to express his gratitude for the loyal and enthusiastic cooperation of the British element The Harvard unit, with the assistance of the British, dealt with all cases coming in and since then have received three or four hundred daily
>
> I, as an American, was simply thrilled with their work which I know has won unstinted admiration from the British army medical service I have also heard stories of the work of Dr Harvey Cushing He went into the most advanced clearing station and there dealt with all the most serious cases as they came along

Members of Medical Corps Ordered to Active Duty

ALABAMA

To Fort Riley, Kansas Assigned to station, Capt William H Richardson, Clinton, being relieved from further station at Ft. Bayard, N M

To Fort Sam Houston Texas. To report to board for examination for promotion Lieut Octavius M Spencer Birmingham

To Allentown, Pa. For temporary duty, Lieut Percy O Chadron, Dothan

To Army Medical School, Washington D C. For instructions, Drayton H Dougherty Selma

ARIZONA

To Fort Benjamin Harrison, Ind Roy K Evans Douglas.

To Home from Southern Department, Alva R Hull and Adolphus A McDaniel Douglas.

ARKANSAS

To Fort Riley Kansas, J H Downs Vilonia Braxton V Powell Camden and Feast L. Proctor, Little Rock

To Army and Navy General Hospital Hot Springs Lieut Loyd Thompson on completion of present duty

CALIFORNIA

To Proper Station at Expiration of Leave, Lieut. Herman J Schlageter San Francisco

To Wrightstown N Y As camp sanitary officer, Major Frederick S Macy San Francisco

To San Francisco and report to commanding general Western Department for assignment to duty John A Dougherty, San Francisco Major Walter C Chidester, San Mateo Capt. Norman E. Williamson Stockton and sail about July 5 for Hawaii for duty Lieut Robert K Hackett Los Angeles for duty with Field Hospital and Ambulance Co No 2

To Home Lieut. Elmer S Tenney, Ft Baker Calif, relieved from duty at Fort Warren Mass.

To Detroit Lieut. Thomas G Holmes San Francisco

To Fort Riley Kansas Lieutenants Frank E Winter and Je M Burlew Santa Ana Harry B Reynolds Palo Alto William A. Howard and John L. Pomeroy Los Angeles.

To Sacramento Calif Lieut James H Parkinson, Sacramento

To Letterman General Hospital Presidio of San Francisco Calif Lieuts. Lionel D Prince and John G Harrington San Francisco

To Fort McDowell Calif Capt. Ernest Dozier Redding Calif

To Army Medical School Washington D C, for instruction, Lieut Col Edward R Schreiner San Francisco

To Fort Benjamin Harrison training camp Lieut Jean R Oliver San Francisco

COLORADO

To Fort Riley Kansas William W Jones Wallace C. Kent and Harold G Garwood Denver Curtis Atkinson, Fort Collins William W Frank Glenwood Springs Homer C Moses, Colorado Springs.

To Army Medical School Washington, D C., for instruction Lieu James Redmon Denver Colo

CONNECTICUT

To Fort Benjamin Harrison Ind, Captain Richard Blackmore, Farmington Conn

To Army Medical School, Washington, D C, for instruction Lieut J I Wiseman Middletown Conn

DELAWARE

To Army Medical School Washington D C for instruction Lieut Meredith I Samuel Wilmington Lieut. Lewis Booker New Castle is honorably discharged from the service of the United States.

DISTRICT OF COLUMBIA

To Home and to Report to Adjutant General, Capt. Kerwin W Kinard Washington

To Atlanta, Capt William S Shields, Washington, and assume charge of medical supply depot

To New York William S Shields, Washington

FLORIDA

To Charleston Va, Lieut George M. Randall St Petersburg

GEORGIA

To Fort Oglethorpe Ga. Lieut. William N Adkins, Atlanta is relieved from duty at Fort McPherson and is to report to the commanding officer of the medical officers training camp at Ft. Oglethorpe for duty Lieut. Madison H Bowman Ft McPherson is relieved from duty in the Southern Department and will proceed home

Par 34 S O 125 May 31 1917 War D, as relates to Lieut. Evans B Wood Atlanta, is revoked.

To Home, from Southern Department, Lieut. Stevens T Harris, Atlanta

Par 61, S O 124 May 29, War D as relates to Major William L. Cousins, Atlanta is revoked

To Army Medical School Washington, D C., Lieut Charles H Harvey Fairburn

IDAHO

To Washington D C Lieut. Frank L. Cole Rigby

ILLINOIS

To Fort Benjamin Harrison Ind Lieut Russell M Wilder Chicago

To Fort Snelling Minn Captains Ephraim K. Findlay and Carey Culbertson Chicago Lieut. Charles H Lovewell Chicago

To Fort Riley Kansas Lieuts. William W Hendricks Randolph Jesse T McDavid and Arthur F Wilhelmy, Decatur Bert L Wyatt, August H Luedera Harry S Cradle, Harry E. Mock Horatio P Freeman Samuel M Edison, Aubrey K Brown and Charles S Williamson Chicago Maurice L. Puffer, Downers Grove William L Hall, Greenville Emory C Gaffney, Lincoln Edward K Ellis Murphysboro Clarence M Dargan Pontiac and Frank M Barker, Waukegan

To Washington D C, Lieut Ross W Griswold Litchfield, Henry J Ullman Highland Park, Leon Unger, Chicago, Lieut Royal Tharp, East St Louis

To Headquarters Central Dept, Chicago Capt Charles I Clayton, Chicago, and Lieut John W Tope, Oak Park

INDIANA

To Fort Benjamin Harrison, Ind Lieut George G Van Mater, Peru Capt George I Guthrie Lieut Ernest De Wolfe Wales, B T Dakky Fred F Hickson Floyd N Shipp, Eddie De B Thixtum, and Cecil I Wayman William I Clevenger and Blanchard B Pettijohn, Indianapolis George C Carpenter Terre Haute Albert W Collins, Anderson Harold B Cox, Morristown, Paul Higbee, Sullivan Earl D Jewett St Paul Valentine A Makenheimer, Mooresville Elmer B Mosier Windfall John T Smaples, Boonsville, Henry H Thompson and Frederick A Tucker Noblesville, Frederick M Whisler, Wabash, and William H White Edinburg

To Home from Southern Department, Lieut Barzilla M Hutchinson, Mishawaka

So much of Par 61 S O 124 May 29 War D, as relates to Lieut Adrian E Lauve, Ft Wayne is revoked

IOWA

To Dubuque Ia Aviation Station, Capt Eugene R Lewis Dubuque

To Com Gen Central Department, Lieut John S McAtee Council Bluffs

To Fort Riley, Kansas Harry C Parker Dubuque Ora F Parrish, Grinnell Fred J M'Allister, Hawarden and William D McPaul, Miles.

KANSAS

To Fort Riley Richard C Young Arkansas City Orestes L. Carlinghouse Iola Samuel Murdock Jr Sabetha and George I Thacher, Waterville Capt W L. Wilmoth Denison Lieuts H L. Chambers, Lawrence J C Lardner Fort Scott J D Riddell Salina H L. Scales, Hutchinson J R Scott Newton and Capt William H Richardson Ft Riley

Par 68 S O 124 May 29 War D, as relates to Capt. Harold P Kuhn Kansas City, is revoked

To Fort Benjamin Harrison, Lieut George W Lee Yates Center

KENTUCKY

To Duty with Ambulance Co No 6, Lieut Charles K Berl Louisville

To Home, Lieut William A Quinn, Henderson

MAINE

To Fort Oglethorpe Ga, Lieut Bial F Bradbury, National Soldiers' Home

To Fort Preble Me. Lieut F N Whittier Brunswick.

To Army Medical School Washington D C, for instruction Lieuts David E Dolloff Biddeford

To Fort Benjamin Harrison, Captain Alfred W Haskell, Portland, Lieut George A Allen, Lovell

MARYLAND

Lieut Frederick V Beitler Halethorp is honorably discharged

To Fort Myer Va Lieut Henry L. Smith Baltimore

To Allentown Capt John R Devereux Chevy Chase

Par 52 S O 121 May 25, 1917, War D as relates to Lieut Kenneth A Phelps Baltimore is revoked

To Army Medical School, Washington, D C, Lieut Robert W Johnson Jr Towson

To Fort Niagara N Y, Capt F M Chisolm, Annapolis

Par 34, S O 125 May 31, W D, as relates to Lieut Oscar V Linhardt Baltimore is revoked

To Army Medical School Washington D C Lieuts. John L. Evans and Joseph E Moore John A Etheridge Baltimore

To Fort Riley, Lieut Oscar V Linhardt Baltimore

MASSACHUSETTS

To Fort H G Wright N Y Capt Glenn I Jones, Ayer

To Army Medical School, Washington D C Lieut Howard M Clute, Hyman Green Boston William D Reid Newton

Capt Walter Clarke Howe, honorably discharged from service Boston

To Fort Banks Mass Lieut W L. Tucker Hinsdale

So much of Par 61 S O 124 May 29, as relates to Capts. W J Mixter S M Bunker and Lieut. G A Leland, Jr, Boston is revoked

To Home Lieut Elmer S Tenney Ft Warren

To Base Hospital No 6 Boston Lieut James H Means Boston

To Home from Fort Logan, Lieut Walter A Jilsson, Westboro

To Fort Strong, Lieut John W Bartol Boston

To Fort Warren Lieut. James J Goodwin Clinton

To Fort Banks Willys L Tucker, Hinsdale

To Fort Benjamin Harrison, Capt Miles D Chisholm Westfield Timothy F Goulding John L. Mahoney Boston Capt Harvey A Kelly Winthrop John D Peters Great Barrington Lieuts Chester C Beckley, Lancaster Joseph D Collins and William J Collins, Northampton Ralph W Dennen Waltham John H Kearney, Fitchberg Benom M Latham Mansfield Charles W Pease Needham, Samuel D Rumrill and Erdix T Smith Jr Springfield Willis L Tucker Hinsdale

MICHIGAN

To Fort Benjamin Harrison Lieut Clarence E. Burt Ithaca Captains Frederick W Baesleck Carey P McCord Detroit George

S Foden, Highland Park, Warren P Morrill, Benton Harbor, Gordon F Willey, Kalamazoo, Lieut George M Lochner, Adrian

To Washington, D C, Capt. Hugh A Freund, Lieut Harold E Clark, Nelson Allan Myll, Detroit, Capt. William H Honor, Wyandotte

To Home, from Southern Dept., Lieut Charles F Smith, Whitehall

MINNESOTA

To Fort Snelling, Lieut Hugh F M'Gaughey, Winona

To Trenton, Mo, to examine applicants for the Officers' Reserve Corps, Lieut. James R McVay, Rochester, Minn After completion of this duty he will return to his home and be relieved from further active duty

To Fort Riley, Kansas, Lieuts George W Snyder, Belleplain, John C Sessions and Daniel M Shewbrooks, Minneapolis, Harley G Rickford, Minnesota Lake, Joseph O McKeon, Mt. Gomery, Charles Bolsta, Ortonville William H Hengstler, Osakis, John C Wilkinson, Red Lake Falls, Frank H Clay, St Charles, Walter D Brodie and Major Paul B Cooke, St Paul

To Millard Hall, University of Minnesota, Minneapolis, Lieut James M Northington, Minneapolis.

MISSISSIPPI

To Fort Riley, Kansas, Robert M Stephenson, Lexington

Resignation of Lieut Ed L Robertson, Belzoni, of his commission is accepted

To Army Medical School, Washington, D C, James P Wall, Jackson

MISSOURI

To Kansas City, Mo, examining board, Capt Roger B Brewster, Kansas City

To Fort Leavenworth, Kan, to report to the commanding officer for duty, Capt Frederick W Shaw, Mt. Vernon

To Fort Riley, Ka , John W Johnson, Hayti, Reginald H Meade, Kansas City, William H Breuer, St James, Nelson J Hawley, St Louis, William A Beckmeyer, Sedalia.

To St Louis, Capt Harry S Crossen and Lieut Pierre I Chandeysson, St Louis

To Army Medical School, Washington, D C, Lieut. Wallace A Belsey, St. Louis, Clarence A MacGuire, William T Fitzsimmons, Kansas City, Lieut Robert Vinyard, St Louis

MONTANA

To Fort Riley, Kan, Robert E Hathaway, Glendive, James H Irwin, Great Falls

NEBRASKA

Honorably Discharged, Lieut Oswald H Margaret Papillion

To Fort Riley, Theodore H Koefoot and William R C Neumarker, Columbus, Henry Eugene King, Belgrade Willis J Redfield, Grand Island, Lieuts Harold E Eggers, Albert A Fricke, Capts Henry L Akin, Aldis A Johnson, George R Gilbert, Omaha

NEW HAMPSHIRE

To Army Medical School, Lieut Benjamin P Burpee, Manchester

NEW JERSEY

To Fort Oglethorpe, Ga., Lieut John L Meeker, Newark

To Army Medical School, Washington, Lieut C A McGuire, Atlantic City

To Syracuse, N Y, to report to commanding general, Eastern Department, at Governor's Island, N Y, for assignment to duty with United States troops at Syracuse, Lieut Philip H Finkelstein, Paterson

To Major David A Kraker, to examine applicants, Lieut Guerney Williams, Atlantic City

NEW MEXICO

To Baltimore (Johns Hopkins Hospital), for duty as adjutant with Base Hospital No 18, Capt Thomas H Johnson, Ft Bayard

To Jeffersonville, Capt John P Fletcher, Ft Bayard, to establish an automobile ambulance depot in the vicinity of that place

To Washington, Capt. John P Fletcher, Ft. Bayard, to report to board at Washington for examination for promotion

NEW YORK

To West Point, Lieut Kenneth A Phelps, New York

To Home and Report to Adjutant General, Lieut. Charles B J Mittlestaedt, Fishers Island

To Syracuse, N Y, Lieuts Earl H Eaton, David Lothringer and Byron H Hermann, New York, Louis E Breslau, Brooklyn.

To New York, and report to Major Henry C Coe, M R C, 40 East Forty First Street, for the purpose of examining applicants for the Officers Reserve Corps Major Graeme M Hammond, Capts Burton J Lee and James H Lawson, and Lieut Herbert Wilcox, New York

To Allentown, Pa, Major Rolfe Floyd, Capt Clarence A McWilliams, Lieuts Henry W Cave, John E Williams, Thomas C Peightal and John R Carlisle, New York

To Mineola, L I, Lieut Everett G Brownell, New York, and report to Major Rayn C Bolling, aviation section Signal O R C

To Fort Oglethorpe, Ga, to officers' training camp, Lieut John R. Lecomte, New York

To Fort Riley, Kan, Charles B Palmer, Plymouth

To Washington, D C, Lieuts Francis F Callahan, Castleton Corners, William H Baughman, James N Worcester, H Green and H J Etheridge, New York, Capt Francis J Cahill, Hoosick Falls, Frank H Hurst, Guilderland Center Everett C Jessup, Brooklyn.

To Fort Benjamin Harrison, Majors Haven Emerson, Thomas W Hastings, Capts James B Gere, Llewellyn E Hetrick, Charles J Imperatori, Robert L Loughran, Marion B McMillan, Albert S Morrow, Reeve Turner, Frederick T Van Beuren, Jr, Lieuts Harry D Brewster, Daniel B Brinsmade, Meyer M Eckert, Reuben J Held, Bruno S Horowicz, James W Jameson, David M Kaplan, Joseph E J King, Henry M Larson, Maximillan L Loeb, William A Morgan, Rufus A Morison, Jacob J Steinfelder, Charles W Strowger, Norman E Titus, Harry H Varner and Joseph G Yocum, New York Capts Palmer H Lyon, Valois, Willard D Preston, Attica, Lieut Clarence E Mullens, James N Vanderveer, Albany Capt Dayton C Wiggin, Staten Island, Lieuts Joseph H Beattie, Dobbs Ferry, Carl Boettiger, Long Island City, Francis X Brown, John B Byrne, Harry Cleveland Harris, John J Hauff, Benjamin E Helprin, Howard LeRoy Norton, Brooklyn, David C Byrne, Jr, Great Neck John C Hoeffler, Salamanca, Frank M Holcombe, Keesville, Charles W Selover Stanley, Harrison G Slot, Glen Cove, Joseph Sparck, Castleton Corners Harry A Steckel, Kings Park, Benjamin Van Campen, Olean Lieut. Louis de Keyser Belden, New York, Lieut James M Flynn, Rochester

So much Par 61, S O 124, May 29, as relates to following officers, M R C, revoked Lieuts L E Deyoe, G K Rhodes, Abraham Zingher, New York

To Plattsburg, N Y, Capt. R W Andrews, Poughkeepsie, Lieuts A W Cutler, Omeonta, T W Jenkins and Joseph A Lanahan, Albany, C W Many, Florida, G W Timmers, Castleton, and Wilmarth S Buck, Plattsburg

So much of Par 61, S O 124, May 29, War D, as relates to Major John Warren, New York, is revoked

So much of Par 61, S O 124, May 29, War D, as relates to Major Fred H Albee, New York, is revoked

So much of Par 61, S O 124, May 29, War D, as relates to Lieut Clarence P Thomas, New York, is revoked

To Madison Barracks, Major John Warren, New York

So much of Par 61, S O 124, May 29, War D, as relates to Capt Edgar A Vander Veer, Albany, is revoked

From Southern Department to Home Lieut Henry S Fruitnigh, New York

To West Point, Military Academy, Lieut Fredk L Senger, Brooklyn

To Home Thomas Kenyon, New York.

NORTH CAROLINA

To Washinton, D C, Capt William P Herbert, Asheville

NORTH DAKOTA

To Fort Riley, Kan, Samuel J Hillis, Berthold, Philip G Reedy, Regany

To Army Medical School, Lieut Olaf Kittleson, Grand Forks

OHIO

To Fort Benjamin Harrison, Ind, Lieuts De Enna Darrell DeNeen and Howard J Ware, Cincinnati, Jay M Harrison, Toledo, Edwin J Kennedy, Peebles Fred W Lane, Cambridge Judson Teeter, Pleasanthill

To Fort Snelling, Minn, Lieut. Horatio Z Silver, Eaton

To Cleveland, to report to Major Paul S Bond Corps of Engineers, for duty in connection with the securing enlistments for the nine regiments of engineers for the Engineer Officers Reserve Corps, Lieuts Robert W Williams and Charles D Treister, Cleveland

To Home, Lieut W A. Quinn, Portsmouth

To Army Medical School, Washington, D C, Lieut A Strauss, Cleveland

To Fort Benjamin Harrison, Ind, to training camp, Benjamin C Barnard, Alliance, Roy A Wilson, Dennison, Herbert W Bennett Lisbon

OKLAHOMA

To Atlanta, as sanitary officer, Capt Clarence E Fronk, Ft. Sill

Par 68, S O 121, May 25, 1917, War D, as relates to Lieut. Abraham L. Blesh, Oklahoma City, is revoked

OREGON

To San Francisco, and report to commanding general, Western Department for assignment to duty Capts Walter C Belt, Gresham Jesse P Truax, Grants Pass, Ernest C Dalton and Calvin S White Portland George E Darrow, Eugene

To Home, from Southern Department, Lieut Leonard P Bell, Ft Stevens

To Fort Benjamin Harrison, Capt Charles C Osborn, Portland

PENNSYLVANIA

To Allentown, Pa, Medical Corps Capt Ward Brinton, Philadelphia

To Office of Surgeon General, Washington, Major Bert W Caldwell, Pittsburgh

To Army Medical School, Washington, Donald W Cameron, George R Harris, Jr, Lieut Thomas P Edmundson, Pittsburgh, Joseph G Fernbach, William J Martin, Abraham Strauss and C H Harvey Philadelphia, John P McComb, Bellevue Philip J Sheridan, Oil City

So much of Par 61, S O 124, May 29, as relates to Lieut. T M Armstrong Philadelphia, is revoked

To Fort Benjamin Harrison, Major James F Edwards, Pittsburgh John H G Gallagher, Connellsville

To Fort Oglethorpe, Ga., Lieut. David G Harvey, Huntingdon Valley

Par 61, S O 124, May 29, War D, as relates to Lieuts. Frank C Knowles and Thomas G Miller, Philadelphia, is revoked

To Philadelphia, Lieut George P Pilling, Jr, Philadelphia

Par 52, S O 121, May 25, War D, as relates to Lieut Walter E. Lee, Philadelphia, is revoked

Par 52, S O 121, May 25, War D, as relates to Lieut. John McKenna, Lansdowne, is revoked

To Home, from Fort Dade, Fla., Lieut. Reuben L. Robert Charlottesville

Par 61 S O 164, May 23, War D, as relates to Capt James P Austin, Philadelphia is revoked

Par 61 S O 124 May 29 War D, as relates to Capt Charles M Montgomery and William D Stroud, Philadelphia is revoked

Par 52 S O 121 May 25 1917 War D, as relates to Lieut Donald Guthrie Sayre is revoked

So much of Par 61 S O 124 May 29 War D, as relates to Capt Ward Brinton, Philadelphia, and Edward J Gordon, Wyncote is revoked

RHODE ISLAND

To Fort Benjamin Harrison Ind, Lieut George W Gardner Providence

SOUTH CAROLINA

To Allentown Pa Medical Corps Lieut Marion H Wyman Columbia

SOUTH DAKOTA

To Fort Omaha Neb Capt James A Mattison Hot Springs.

TENNESSEE

To Army Medical School Washington D C, Lieut. John W Morris Somerville

To Fort Oglethorpe, Ga Lieut Howard L Walker, Memphis

TEXAS

To Army Medical School Washington Capt Ernest W Bertner, Houston Lieut Eugene V Powell Ft Worth Lieutenants William H Lloyd El Paso is relieved from duty in the Southern Department and will proceed home

So much of S O 123 May 28 War D as relates to Major Charles C Billingslea M C Del Rio is revoked

Sick leave for four months to Major William P Banta Eagle Pass

To Fort Sam Houston Tex Capt Frederick C A Kellam Jr Ft Clark to report to board for examination for promotion

Leave for one month granted to Lieut. Joseph C Breitling San Antonio about June 1

To Report to Commanding General, Southern Department Lieut James A Simpson Mission

To Philadelphia Major John B Huggins Harlingen

UTAH

To San Francisco and report to commanding general Western Department for assignment to duty Capt Thomas A Flood Salt Lake City

To Army Medical School Washington D C Lieut. Howard T Wickert Huntsville

VERMONT

Capt Herbert W Taylor Brattleboro honorably discharged from the service

To Fort Williams Me. Lieut Henry R Weston Windsor

To Fort Oglethorpe, Ga for instruction Lieut Henry R Weston, Windsor

VIRGINIA

To Fort Snelling duty with 36th Inf Capt. Roderick W Browne Norfolk.

To Richmond Major Alfred L. Gray Richmond

To Army Medical School Washington, D C for instruction Lieut. J L. Hamner Richmond

Major William L. Little Fortress Monroe in addition to other duties assigned as medical superintendent Army Transport Service Newport News

To Fort Monroe, Lieuts George E Barksdale and Blanton Hillsman Richmond

To Washington Barracks Capt Wilbur M Phelps Stanton

To Allentown Pa Lieut. Edwin S Potter Montpelier

WASHINGTON

To San Francisco and report to commanding general Western Department for assignment to duty Capt. Everett O Jones Seattle Lieut Richard C Hill Irondale

To Baltimore (Johns Hopkins Hospital) Major James D Heysinger Ft. Casey for duty in command of Base Hospital No 18

To Vancouver Barracks Wash Lieuts Pearl C West Seattle and Isaac Sidwell Collins Spokane

WEST VIRGINIA

Resignation of Lieut. Irvin Hardy Morgantown accepted

To Fort Oglethorpe Ga Lieut William H McLain Wheeling

WISCONSIN

To Fort Riley Kansas John M Conley Oshkosh Frank R. Borden Plainfield and William W Pretts Plattsville.

To Fort Logan Lieut William C Bennett Rhinelander

So much of Par 43 S O 124 May 29 War D as relates to Capt Harry Greenberg Milwaukee is revoked

CANAL ZONE

To Washington D C Army Medical School for instruction Lieut. Deane C Howard Balboa Heights.

So much of S O 123 May 28 War D as relates to Capt. James E. Baylis Empire is revoked

Par 51 S O 121 May 25 War D, as relates to Lieut. William C Gibson Pedro Miguel is revoked

From Southern Department to Home Lieut. James C. Burdett Ancon

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities, new hospitals, education, public health, etc)

ALABAMA

Physicians Organize to Serve in the War—A meeting of the medical section of the State Committee of National Defense for the State of Alabama was held in the Senate Chamber of the State Capitol at Montgomery June 14 There were over 200 physicians in attendance Practically every county in the state was represented In opening the meeting Dr I N Baker Montgomery, the chairman of the committee stated that the registration returns of the state show there are 236 physicians in the state who are between the ages of 21 and 31 years These younger men as well as those who are between 31 and 55 years of age were urged to offer their services to the government Every member of the medical profession was urged to appreciate and respond to this privilege and obligation to serve in the present emergency

ARIZONA

Protecting the Practice of the Absent Physician—The Santa Crus County (Ariz) Medical Society has pledged itself to conserve the practices of its members who are called into military service

ARKANSAS

Arkansas Physicians and the War—Baxter County (Ark) Medical Society will care for the practice of its members who respond to the call to the colors All the members of the society have expressed a willingness to do what they can——Five of the twenty-five members of the Phillips County (Ark) Medical Society have volunteered their services and will report at once for examination for commissions in the M R C

CALIFORNIA

New University Hospital—The new Stanford University Hospital which is being erected at a cost of approximately $500 000 will it is expected, be ready for occupancy about October 1

Personal—Dr Harry J Pittock Sacramento, has been appointed assistant physician at the Nebraska State Hospital, Ingleside——Dr Margaret Smyth has succeeded the late Dr J D Young as first assistant physician at the Stockton State Hospital——Dr Louis Lee Seabright is reported to be critically ill in the Harbor Emergency Hospital, San Francisco, the result of a cerebral hemorrhage

CONNECTICUT

Protecting the Practice of the Absent Physician—The Windham County (Conn) Medical Society has endorsed the Maryland plan for safeguarding the practices of members called into military service

State Medical Society Meeting—The one hundred and twenty-fifth annual meeting of the Connecticut State Medical Society was held in New Haven, May 23 and 24, under the presidency of Dr Samuel M Garlick, Bridgeport and the following officers were elected president Dr Edward K Root Hartford, vice presidents, Drs Patrick Cassidy, Norwich and Charles C Godfrey, Bridgeport, secretary, Dr John E. Lane New Haven, and treasurer, Dr Phineas H Ingalls, Hartford

Personal—Dr William C Sandy, formerly medical instructor of the State Hospital for the Insane, Columbia, S C, has assumed his duties as assistant superintendent of the Connecticut Hospital for the Insane at Middletown, succeeding Dr William E Fisher, resigned——Dr Thomas F Erdman has been appointed superintendent of the Norwich State Hospital for the Insane, succeeding Dr Henry M Pollock, who has accepted the superintendency of the Massachusetts Homeopathic Hospital at Boston

State Health Evolution.—Connecticut, like Maine, has joined the group of progressive states which have abandoned the plan of a state board of health in favor of a single commissioner A new law passed this spring gives reasonably effective powers over the local health officer to the state commissioner of health, and provides a public health council with authority to formulate a state-wide sanitary code, following in its main essentials the New York and Massachusetts plan

Reorganization of New Haven Health Department.—The Public Health Department of Yale University, under the direction of Prof Charles E A. Winslow, has completed an exhaustive survey of health conditions in the city of New Haven on the basis of which a comprehensive plan for the reorganization of the department in bureaus, with the expansion of the activities of the department along the modern lines of infant welfare and tuberculosis work. The contemplated plan, which has been accepted by the board of health and has the backing of many leading citizens, involves an increase of the per capita expenditure for health work from 28 cents to about 45 cents

Amendments to Pauper and Insane Law—The last general assembly enacted certain amendments to the law concerning the commitment of pauper and indigent insane, which will improve conditions After October 1, all sums for the support of pauper and indigent insane will be collected by the state, whether derived from friends and relatives of patients or from towns The state will then forward a check to the state hospital treasurer for the total amount of their monthly expenses This will remove from hospitals the burden of acting as collecting agencies and will enable the state, with its more efficient collection machinery, to investigate the financial status of the patients committed to public institutions, and to secure an adequate recompense. ——Other amendments are provisions whereby trained attendants and nurses may be sent to bring patients to the hospitals, the provision for uniform commitment blanks regardless of the authority by which patients mav be committed, and the provision for both emergency and voluntary admissions under more flexible conditions than was formerly the case, as the former restrictions were such as to render such admissions very infrequent.

ILLINOIS

Illinois Physicians in the War—The Madison County (Ill) Medical Society reports that twenty-five physicians and nine dentists from that county have applied for commissions in the reserve corp of the army

Smallpox in Chicago Heights—During the last two weeks more than twenty cases of smallpox have occurred in Chicago Heights Fifteen of the cases were in negroes About 8,000 persons have been vaccinated The patients are being cared for in the Chicago Hospital for Contagious Diseases, and in the Chicago Heights Isolation Hospital

Bills Passed Which Interest Physicians—Senate Bill No 135 enacted by the last legislature provides for the license of persons practicing chiropody, House Bill No 813 gives the health department the authority to abate any nuisance about the military camp House Bill No 657 revises the medical practice act, and provides that all who practice the art of healing shall take an examination and obtain a license This includes osteopathy

Personal.—Major Mathew A Reasoner, M C, U S Army, has been relieved from duty at the Army Medical School, Washington, D C, and ordered to Chicago to establish a medical supply depot for the central department The building for the depot has been leased at 3920 Federal Street——Dr Sadie Bay Adair, Chicago, has been appointed a member of the board of school trustees——Lieut J G Maxon, M C U S R, Harvard, was given a farewell reception in Harvard, May 26 Dr Maxon sailed for his new post of duty in Hawaii, June 5

Chicago

Chicago Medical Society Elects—At the annual election of the Chicago Medical Society, the following were elected president-elect, William A Pusey, secretary, J V Fowler, councilors at large, John S Nagel, Joseph L Miller, Samuel C Plummer, J H Walsh and Otto T Freer, alternate councilors at large, W T Mefford, Henry G Lampe, Fred G Harris, Howard C Ballenger and George Apfelbach

Chicago Surgeons Elect Officers—At the annual meeting of the Chicago Surgical Society, June 15, an address was made by Col T H Goodwin, surgeon-general, R. A M C, and the following officers were elected president, Dr Carl Beck, vice president, Dr Coleman G Buford, and secretary-treasurer, Dr Kellogg Speed

Rush Alumni Elect Officers—At the last annual meeting of the Rush Medical College Alumni Association, the following officers were elected president, Dr Oliver S Ormsby, Chicago, secretary, Dr Charles A Parker, Chicago, treasurer, Dr Elmer L. Kenyon, Chicago, directors, Drs Asher Sippy and W N Duncan, Chicago

Health Experts Organize—The Chicago Health Association was organized, June 14 The meeting was called by Commissioner Robertson Dr Arthur I Kendall was elected president, and a committee of thirty members, including workers in practically every subject which interests the uplift organization, was appointed Among the members of this committee were Dr William E Quine, A. Augustus O'Neill and Charles P Caldwell

IOWA

Iowa Physicians in the War—Council Bluffs reports that seventeen out of forty physicians have offered their services to the Medical Reserve Corps Eighty physicians from the ninth and eleventh districts of Iowa have applied for appointments in the Medical Reserve Corps

MARYLAND

Second Hospital Unit at St Joseph's—In addition to the hospital unit already organized at the St Joseph's Hospital, under the direction of Drs Yaeger and Frank Martin, another unit is being formed under the direction of Dr Archibald C Harrison of the hospital staff

Personal—Dr David I Macht, for some time assistant in medicine at the Johns Hopkins Hospital, has been appointed lecturer in pharmacology at the university——Dr Anna D S Abercrombie, president of the Maryland Women's War Relief Hospital, has announced that Ex-Gov Edwin Warfield has turned over his country estate in Howard County, near Ellicott City, as a rest home and recuperating center for nurses returning from the battle fronts in Europe

Commencements—The Johns Hopkins University held its forty-first annual commencement on June 12, when diplomas were awarded to 224 graduates, eighty of whom were in the medical school Many of the graduates are already in active military service and were unable to receive their diplomas in person Secretary of war, Newton D Baker, of the class of 1892, delivered the principal address——The annual commencement of the Nurses' Training School at the Sheppard and Enoch Pratt Hospital, Dr Edward N Brush, superintendent, was held on June 13 at the hospital Dr Lewellys F Barker addressed the graduates and Dr Charles H Riley of the board of trustees awarded the diplomas——The annual commencement of the Nurses' Training School of the Eastern Shore State Hospital, Dr Charles J Carey, superintendent, was held at the hospital in Cambridge, June 13 There were three graduates from this new training school

Care of Tuberculous—A war measure of unusual importance is that of the proper care and treatment of tuberculous patients among the soldiers who have volunteered and will enlist in the various branches of national service A committee of the Maryland Tuberculosis Association, consisting of Drs Henry Barton Jacobs, C Hampson Jones and J Hall Pleasants and Mr W Wirt Steele has proposed to the general assembly several recommendations, one of the most important of which is that a special hospital for negro consumptives be created in connection with one of the existing institutions or as a separate unit, provided that for the period of the war, it be used exclusively for the care of invalided white soldiers and sailors by arrangement with the War and Navy Departments if the emergency should require It is their plan that all the state's tuberculosis institutions be correlated, coordinated and controlled under a state tuberculosis commission which should be established by the legislature now in extraordinary session

War Conference on Medical and Hospital Preparation—A conference on medical and hospital preparation for returned soldiers was held in Baltimore, June 13, under the auspices of the Maryland Psychiatric Base Hospital Unit, Maryland Association for the Prevention and Relief of Tuberculosis, Maryland Women's War Relief Hospital, Maryland Red Cross Association, and Alliance of Social and Charitable Agencies Mr E H Scammell, executive secretary of the Military Hospitals Commissions of Canada, Ottawa, was the principal speaker, Dr Thomas S Cullen presided Mr Scammell has had charge of placing crippled and convalescent men in the various hospitals throughout Canada All that has been done heretofore has been to pension the soldier and allow him to return to his home, usually a mental and physical wreck The experience of Canada in this war will point the way to state and government agencies in this country in devising methods of taking care of our soldiers on their return. Canada has provided for over 25,000 crippled and convalescent soldiers in various private and provincial hospitals The vocational training of these injured men has developed in Canada to such an extent that practically every crippled soldier is now taught some occupation that will make him more or less self-supporting so that his strength and earning capacity will be restored to the highest degree possible

NEBRASKA

Medical Building Assured—At the recent session of the Nebraska legislature $350 000 was appropriated for the College of Medicine of the University of Nebraska for the next biennium This includes money sufficient to erect another laboratory building which will be an exact duplicate of the building now occupied

Hospital Completed—The University Hospital the teaching hospital of the University of Nebraska College of Medicine has been completed is being equipped and will open about Aug 1 1917 The total cost of the building and equipment will be approximately $210 000——The Blair Hospital after complete renovation and redecoration was reopened, May 16

Personal—Dr Harry J Pittock, Towle, Calif, has been appointed assistant physician at the Hastings State Hospital——Dr Warren M Phillips Bartley has been appointed second assistant physician at the Norfolk Hospital——Dr Carl Oliver Reed Carter S D, Roy D Bryson Callaway, and Earl B Erskine Wayne have been *commissioned* first lieutenants M C Neb N G——Dr Leverett D Bristol, Boston has been appointed state health officer——Dr William F Wild Lincoln state bacteriologist has been appointed state epidemiologist——Dr Wilford H Crutcher assistant superintendent of the Ingleside State Hospital, has been appointed superintendent of the Orthopedic Hospital Lincoln which has been combined with the Home for Dependent Children.

NEW YORK

Former Surgeon-General Leases Property—Dr Charles Francis Stokes Warwick formerly surgeon general of the United States Navy has leased Onteora Villa at Chappaqua for a long term of years

Letchworth Tablet Unveiled.—The ninety fourth anniversary of the birth of William Pryor Letchworth was celebrated at Letchworth Park Warsaw, May 26, when the Boulder tablet was unveiled

Tuberculosis Hospital Bill Signed—Governor Whitman has signed a bill passed at the recent session of the legislature which provides that every county in the state which has not now a tuberculosis hospital, must establish one before July 1918

Buffalo Alumni Elect New Officers—At the annual meeting of the Alumni Association of the University of Buffalo, June 1 the following officers were elected president Dr William G Bissel Buffalo vice president Drs Jacob Frank, Chicago George E. Blackham Dunkirk N Y Homer J Knickerbocker Geneva N Y Edith R. Hatch Buffalo and John A. Conway, Hornell, N Y secretary Dr Abraham H Aaron, Buffalo treasurer Dr James C Sullivan, Buffalo

Personal.—Dr Frank Overton Patchogue had conferred *on him* a degree of Doctor of Public Health by the New York University June 9——Dr Charles W Farr Ossining is reported to be improving after a serious attack of septicemia due to an operation wound——Dr Edward J Meyer, Buffalo has been appointed chairman of the West Farms Hospital Commission for a term of five years——Dr Charles W Pilgrim Poughkeepsie has declined to accept the appointment as medical superintendent of the Manhattan State Hospital succeeding the late Dr William Mabon but will continue as president of the State Hospital Commission——Drs Montgomery E. Leary and John M Lee have been elected directors of the Rochester Public Health Association

New York City

Orphanage Open—The Israel Orphan Asylum was formally opened by Mr Nathan Straus June 10

Straus Milk Stands Open—The summer work of the Nathan Straus Pasteurized Milk Commission began June 16 with the opening of depots at he parks, where pasteurized milk was sold at one cent a glass This is the twenty-fifth summer in which this philanthropic work of Mr Straus has been carried on

Hospitals Enlarged.—The Broad Street Hospital has increased its facilities by the purchase of a five-story building adjoining the present hospital building——The Jewish Maternity Hospital is to be extended from East Broadway to Division Street the trustees having purchased the property in the rear of the institution

Glanders in New York City—The supervision of stables by the Department of Health has made possible a more effective control of glanders which decreased from 1,153 cases in 1914 to 704 in 1915 and to 399 in 1916 There are under supervision 10 584 stables in the city accommodating 108 036 horses and 1 260 vacant stables with stalls for 6,842 horses

Personal—Dr J Ramsay Hunt has been appointed consulting neurologist to the Letchworth Village for Mental Defectives in New York State at Thiells N Y——Dr Thomas Addis Emmet now past 90 years of age, was given the honorary degree of LL.D by the Catholic University, Washington D C May 29——The degree of LL.D was conferred on Dr Carlos Frederick MacDonald by the New York University at the recent eighty-fifth annual commencement.

NORTH DAKOTA

Hospital News—*The* Nurses Home of the Bismarck Evangelical Hospital recently erected at the cost of $70 000, was formerly dedicated June 6——The contract for the construction of St Joseph's Hospital Mino has been awarded to a Fargo firm The building completed will cost about $100 000

Personal.—Dr Arnt Thomas Floew has been appointed surgeon at Harvey for the Minneapolis St Paul, and Sault Sainte Marie Railway——Dr Eric P Quain, chief surgeon of the Bismarck German Evangelical Hospital is equipping at the cost of $10 000 a section of the National Red Cross the other medical members of the staff are Drs Eric P Quain Julius O Arnson and Frederick F Griebenow, Bismarck and Dr Aloysius Nachtwey, Dickinson

PENNSYLVANIA

Charter Asked for Hospital—Application was made in Scranton June 8 for a charter for the Emergency Hospital, formerly the Dr Reed Burns Private Hospital

Birth Control Bill Passed—A bill forbidding the promulgation *of birth control doctrines has passed the House* of Representatives by a vote of 183 to 3

Doctors for the Army—As a result of a visit to Chester by a group of army surgeons eight members of the Delaware County Medical Society have volunteered for service in the U S Medical Corps The recruits are Drs W Knowles Evans Chester Edwin C Bullock, Upland, Harry Gallager, Glen Olden John O Crist, Carrisburg Louis S Dunn, Chester Thomas A Booth, Boothwyn Walter A Landry, Chester and Michael Freeman, Philadelphia Nine members of the Chester Hospital staff are now enrolled, six having enrolled last month

Personal.—Drs W W Workman Mt Joy, and John D Boger and Grant B Weaver Lancaster have been commissioned First Lieutenants M C Pa M G, and assigned to duty with Field Hospital No 3——Dr Leo C Mundy Wilkes-Barre has been appointed division surgeon for the Delaware and Hudson Railroad Company succeeding Dr David H Lake Kingston resigned——Dr C J Watson has been commissioned First Lieutenant M C N G Pa, and assigned to Field Hospital No 2——Dr Virginia Pereira Alvaraz of Venezuela, was awarded the only prize in anatomy given by the Woman's Medical College at its commencement exercises June 6

Philadelphia

Dr Marshall Retires—Dr Clara Marshall has retired as dean of the Woman s Medical College of Pennsylvania after twenty-nine years of service Dr Martha Tracy, Philadelphia, professor of physiological chemistry and hygiene has been appointed as acting dean

Second Line of Medical Reserve—Physicians of Philadelphia more than 55 years of age and consequently past the age for military services have organized under the auspices of the Philadelphia County Medical Society and will offer their services to the government for activities within their abilities such as the examination of recruits for the army, the care of the injured sick, disabled and convalescents, the care of defectives, the giving of lectures and demonstrations, and the like

Personals—Dr Peter F Moylan has been appointed a Knight of the Order of St. Gregory the Great by the Pope in recognition of his services for Catholic hospital and other charities——Dr Wilmer Krusen director of public health and charities, addressed the class-day exercises of the Samaritan Hospital Training School for Nurses, June 14 ——Dr Moses Behrend has been appointed surgeon to the Mt Sinai Hospital——Dr Arthur J Davidson has been made assistant professor of orthopedic surgery in Jefferson Medical College

Medico-Chirurgical Buildings for Naval Hospital.—Negotiations are now under way by which the present buildings of the Medico-Chirurgical College and Hospital will pass under the management of the Red Cross and will be organized and maintained as a naval hospital. The city will allow the buildings to remain in their present location, and the hospital will be maintained for the duration of the war The hospital will have capacity for about 250 patients, and Logan Square will be utilized largely for recuperation of convalescents

Branch Naval Medical College —Owing to the present overcrowded condition of the Naval Medical School at Washington, a branch has been organized and is now being conducted in this city A six-weeks' intensive course in instruction has been arranged and will be given at the Jefferson, Naval, Medico-Chirurgical and Philadelphia hospitals A group of forty physicians is now here for study, and more will be received as fast as arrangements can be completed The staff of instructors comprises the following Philadelphia physicians Surgery, J C Da Costa, operative surgery on the cadaver, M B Miller, medical and physical diagnosis, Judson Daland, laboratory, H A. Hare, psychiatry, W W Hawke, ophthalmology, T B Holloway Associates, A C Morgan, Guy Hinsdale, F J Dever, Wm H Robertson Clarence N Smith Advisory staff, Dr Diehl, medical director, Dr Dunn, lieut commander Naval Hospital, Dr R A. Bachman, military hygiene and tropical medicine

SOUTH DAKOTA

Personal—Dr Harry J Bartron, Watertown, has been appointed physician of Codington County

Chiropractic Bill Defeated—The South Dakota chiropractic bill was defeated by one vote in the last legislature The chiropractors spent a great deal of time and money trying to lobby the bill through

Ladies Day—The meeting of the Lake Preston (third) District Medical Society held its June meeting at Lake Preston, June 6, and was ladies day Mrs Allison and Mrs Bailey entertained the ladies during the afternoon, while the scientific program was being carried out at the offices of Dr Nathan L. Bailey

State Society Meeting—The thirty-sixth annual meeting of the South Dakota State Medical Society was held in Yankton, May 20 to 30, under the presidency of Dr Francis M Crain, Redfield, and the following officers were elected president, Dr Herman J G Koobs, Scotland, vice presidents, Drs Daniel L Scanlan, Volga, and Harry T Kenney, Pierre, secretary-treasurer, Robert D Alway, Aberdeen (reelected) Mitchell was selected as the place of meeting for 1918

Society will Render Patriotic Aid—At a meeting of the Mitchell District Medical Society, May 15, the society pledged itself to care for and keep the families of the physicians who volunteer for war duty during the period of the war This will be met by a popular subscription payable each month and will be disbursed by a committee of five men in the society The resolution carried unanimously and is certainly a very patriotic and self-sacrificing act on the part of the society

TEXAS

Roentgenologists Hold Meeting—The Texas Roentgen-Ray Society held its fourth annual session in Dallas, May 7, and elected the following officers president, Dr Rabun T Wilson Temple, vice president, Dr Robert H Millwee, Dallas, secretary-treasurer, Dr John W Torbtt, Marlin (re-elected)

Former Presidents Elect.—The annual meeting of the Association of Former Presidents of the State Medical Society of Texas was held in Dallas, May 9, and the following officers were elected president, Dr Bacon Saunders, Ft Worth, vice president, Dr Samuel C Red, Houston, secretary, Dr James D Osborn, Cleburne

Railway Surgeons Re-elect Officers—At the first annual meeting of the Texas Railway Surgeons Association, held in Dallas, May 7, the following officers were re-elected president, Dr Robert W Knox, Houston, first vice president, Dr Joseph H Reuss, Cuero, secretary, Dr Douglas Largen, San Antonio Three new offices were created, and these were filled as follows second vice president, Dr Hugh D Barnes, Childress, third vice president, Dr Edmund B Parsons, Palestine, treasurer, Dr W Burton Thornting, Houston

Health Survey in Dallas County—The Dallas County Commissioners have accepted the offer of the International Health Board and the Texas Board of Health to be one of five counties for a health demonstration, beginning June 19 They have appropriated $2,400 to meet a portion of the expense for Dallas County The plan includes lectures in rural communities, a record of sickness from preventable diseases with time lost from work and expense for medicine and physicians' bills, the examination of sanitary conditions, hookworm, intestinal parasites and malaria, and the examination of children of school age for physical defects

CANADA

Council Meeting—The annual meeting of the New Brunswick Council of Physicians and Surgeons was held in April, and the following officers were elected *president, Dr Levi* M Curren, treasurer, Dr Allan F Emery, and registrar, Dr John S Bentley, all of St John

Staff Moved to Camp—The army medical authorities, Canada, are moving the staff of the Hamilton (Ont) Hospital to Camp Borden, where they will be under the command of Capt William L C MacBeth, Toronto Accommodation for 400 additional beds is being provided at the camp

New Details—The appointment of the following officers to the Army Medical Corps Training Depot No 2 has been approved provisionally to be captain, Lieut. Alfred E. Morgan, to be lieutenants, Frank Roy Smith, Harold John Irvine, Nicholson William Furey, Charles R McTavish and Charles Vincent Scott

Hospital News—The Holy Cross Hospital at Calgary, Alberta, is to be enlarged——A new hospital is to be opened at Fort McMurray, Alberta——The Canadian Military Hospitals Commission will build an amusement hall for returned soldiers on the grounds of the Ontario Hospital for the Insane at Whitby, Ontario

Convocation—The annual convocation of McGill University Montreal, took place May 11, when the degree of M D, C M was conferred on a class of sixteen All the candidates had already seen military service abroad, and returned to Canada to complete their studies——The annual convocation of Dalhousie University, Halifax, N S, was held, May 10 Seven candidates received the degree of M D, C M Several of them will join the C A M C

Personal.—Major D A Clark, Toronto, is now A.D M S, Bramshott, England——Col A E Ross, M D, M P P, Kingston, Ontario, is director of medical services for Canadian Overseas forces in France——Dr M F E Graham, assistant physician at the Brockville, Ontario, Hospital for the Insane, has been appointed resident physician of the Royal Jubilee Hospital, Victoria, B C——The French War Office has decorated for conspicuous bravery the following members of the C A M C Lieut.-Col Arthur Mignault, Montreal (Croix de Chevalier), Capt Arthur Chester Armstrong, Alexander, Man (Croix de Guerre)——Capt G Russell Reid Toronto, has been appointed medical officer of the 253rd Battalion —— Amongst Canadian physicians reported recently wounded are Col J J Fraser, Walkerton, Ont, Capt. A. H Wallace, Chilliwack, B C, Lieut R S Stone, Chatham, Ont

GENERAL

Otologists Elect Officers—At the annual meeting of the American Otological Society in Atlantic City, N J, May 30, Dr Norval H Pierce, Chicago, was elected president, Dr Ewing W Day, Pittsburgh vice president, and Dr George E Shambaugh, Chicago, secretary

Eye, Ear and Throat Men to Meet.—*The twenty-second* annual meeting of the American Academy of Ophthalmology, Oto-Laryngology will be held at the Hotel William Penn Pittsburgh, October 29-31, under the presidency of Dr William L Dayton, Lincoln, Neb

Milk Experts Hold Meeting—The annual meeting of the American Medical Milk Commissioners was held in Brooklyn, May 31-June 1 and 2, and the following officers were elected president, Dr Otto P Geier, Cincinnati, secretary, Dr Alfred Bell, Brooklyn, and treasurer, Dr L. R. De Buys, New Orleans

Gynecologists Hold Meeting—At the forty-second annual meeting of the American Gynecological Society, held in Pittburgh June 1, the following officers were elected president, Dr John G Clark, Philadelphia, vice presidents, Dr Henry T Byford, Chicago and Brooks H Wells, New York City, secretary, Dr George G Ward Jr, New York City, treasurer, Dr Brooke M Anspach, Philadelphia

Car for Medical Staff—A medical car fitted up with a special reference to the examination of the railway employees has been built by the Baltimore and Ohio Railway The car is to be used as an office for the chief medical examiner of the company, and his staff and is equipped with all apparatus necessary for making the examination of employees, and for giving instruction in first aid to the injured

Tri-State Hospital—The State Hospital for Cripples has asked Arkansas and Mississippi to share in the first cost of the Tri-State Hospital for Crippled Children, which is to be located in or near Memphis Memphis has promised to give $25 000 for the institution In the three states there are said to be nearly 10,000 crippled children, most of whom are dependents

Railway Surgeons Elect Officers—The sixteenth annual meeting of the Frisco Medical Association was held in Springfield May 28 and the following officers were elected president, Dr James A. Foltz Ft Smith, Ark , vice president Dr Elmer E. Liggett, Oswega, Kan , secretary-treasurer, Dr Ross A Woolsey, St Louis St Louis was selected as the place of meeting for 1918

New Officers for Surgical Association—The annual meeting of the American Surgical Association was held in Boston June 2 and the following officers were elected president Dr Thomas W Huntington San Francisco, vice presidents Drs Albert J Ochsner Chicago and John B Deaver, Philadelphia, secretary Dr John H Gibbon, Philadelphia Cincinnati was selected as the meeting place for next year

Sanitarians Meet in Greenville—The annual meeting of the Southeastern Sanitary Association was held in Greenville, S C, May 11 and 12 and the following officers were elected president Dr Mather M McCord Rome Ga., vice presidents Drs A. V Wood Brunswick, Ga Francis A Coward Columbia S C Carl V Reynolds, Asheville N C, and J O Smith Nashville, Tenn, and secretary-treasurer, Dr Clarence E. Smith Greenville, S C.

New Officers for Laryngological Society—At the annual meeting of the American Laryngological Society held in Atlantic City May 30 it was voted to make the next congress a jubilee in celebration of the fortieth anniversary of its foundation Dr J Solis Cohen Philadelphia, one of the founders was chosen to preside The following officers were elected president, Dr Thomas H Halsted Syracuse, N Y vice presidents, Dr John E. Rhodes Chicago and Dr D Crosby Greene, Boston secretary Dr Harmon Smith, New York City treasurer Dr J Payson Clark Boston and librarian Dr Joseph H. Bryan Washington D C.

Throat, Nose and Ear Specialists Hold Meeting—At the twenty-second annual meeting of the American Laryngological Rhinological and Otological Society held in Atlantic City June 1 Dr George L Richards, Fall River Mass, was elected president, Dr D Crosby Greene Jr Boston, vice president for the eastern section Dr Daniel W Layman, Indianapolis vice president for the middle section, Dr Thomas W Moore Huntington W Va, vice president for the southern section, Dr Frank R. Spencer Boulder Colo, vice president for the mid-western section, Dr Harrington B Graham San Francisco vice president for the Western Section, Dr William H Haskin New York City, secretary, and Dr Ewing W Day Pittsburgh, treasurer

Southern Railway Surgeons Meet.—The annual meeting of the Southern Railway Surgeons' Association was held in Jacksonville, Fla. May 15-17 and the following officers were elected president Dr Aurelius R Shands, Washington, D C , vice presidents Drs Joseph A. Goodwin, Jasper, Ala , Daniel V McClary Dale, Ind Edgar C Doyle Seneca, S C, and Oliver G Falls, Kings Mountain N C and secretary-treasurer, Dr William A Applegate, Washington, D C. The prizes for the best papers read at the convention were awarded as follows first prize, Dr Hugh R Black, Spartanburg, S C., second prize Dr Daniel V McClary, Dale, third prize Dr Aurelius R. Shands Washington D C., and fourth prize Dr George P Neel, Greenwood, S C

Civil Service Examinations.—The United States Civil Service Commission announces an open competitive examination for anatomists, both men and women, to be held, July 11 at various places throughout the United States to fill vacancy in the Army Medical Museum Office of the Surgeon General, Washington, D C, at $1,600 a year, and future vacancies requiring similar qualifications will be filled from this examination The candidate must have at least a collegiate degree, must have a thorough knowledge of the anatomy and be experienced in the dissection of disease-bearing mosquitoes and of the relation of mosquitoes to transmission of the disease Applicants should apply to the Civil Service Commission, Washington D C, or the secretary of the local civil service board for Form 1312, which gives the particulars of this examination

Bequests and Donations—The following bequests and donations have recently been announced

St Mary's Free Hospital for Children, New York City, $15,000, St Luke's Hospital, New York City, $25,000 by the will of Miss Susan Mount

German Hospital Philadelphia, $20 000 Polyclinic and Philadelphia Lying in hospitals each $10 000 by the will of William P Baltz.

Harriman fund for Orthopedics in Yale University to provide for the salary of a professor of orthopedics, who shall divide his time between the Medical School and the University Board of Health, and whose duties in the latter part will be the care of physical deformities in students of the University, a gift of bonds, which will yield an income of $4 000 annually, by Mrs *Edward H Harriman*

Long Island College Hospital Brooklyn, more than $45,000 and Dr John A Longmore the medical library and cash valued in all at $89 892 01 by the will of Dr John A McCorkle

Long Island College Hospital Brooklyn, a donation of $50 000 to the McCorkle Memorial Fund by friends of the late Dr McCorkle

Columbia War Hospital, New York City, a donation of $175 000 by Mr Daniel G Reid

Gaylord Farm Sanitarium, Hartford Conn a donation of $100 000 to the endowment fund by Mr Henry H McHarg, Stamford Conn

Hospitals in Vermont Massachusetts, and Rhode Island donations of $600 000 by Ira D Calef, who died recently in Washington, Vt

FOREIGN

Barany Goes to Uppsala—The University of Uppsala has *appointed Robert Barany of Vienna, instructor in otology, rhinology and laryngology It will be remembered that he was awarded the Nobel prize in medicine corresponding to the year 1914*

Another Martyr to the Roentgen Rays—Dr J Pujol of Barcelona was the first in that part of Spain to apply therapeutically the Roentgen rays His Roentgen cabinet was opened in 1897 before science had learned to protect the operator In time he developed gangrene in both feet, and one leg had to be amputated

Recent Casualties in the British Army Medical Corps—Lieut Col W B Grandage in command of a combatant unit, aged 37 Capt J F S Annesley aged 52, Capt P H Burton aged 49, Lieut J Rae, Col J H E Austin, member of the Royal Army Medical Corps since 1887 serving in India, Egypt South Africa and France, Col F A Symons, Lieut J A Gregory aged 26, Capt W G Cummings, Capt H H Robinson Capt R. F Russell, Capt C A W Pope, Capt R H Wilson, Capt J E Black, and Lieut. J Marshall

Smallpox at Berlin—The *Hospitalstidende* of Copenhagen quotes from the *Berliner klinische Wochenschrift*, No 14, 1917 to the effect that there had been 181 cases of smallpox at Berlin this year, to March 21, and 900 cases in all throughout Prussia The mortality was about 10 per cent. Physicians were advised to vaccinate anew at once when the first vaccination did not take They were warned further that, instead of the ordinary scarification, it would be better to make a deeper incision on account of the frequently observed modification of the skin in consequence of the restricted diet. A scratch with a comparatively blunt instrument is better for the purpose than a cut with a sharp knife

Deaths in the Profession Abroad—G Rummo, professor of clinical medicine at the University of Naples and founder and editor of the Italian medical weekly, *Riforma Medica*, now in its thirty-third year Rummo defined several clinical pictures before him only vaguely surmised, such as cardioptosis—which is listed in the Surgeon-General's Catalogue as 'Rummo's disease"—also diseases of the blood-producing apparatus, certain forms of cirrhosis of the liver, etc——O von Schron, professor of pathologic anatomy at the University of Naples since 1864 Besides works on pathologic anatomy he has published others on what he called the 'phthisiogenous microbe,' on the serous, gaseous and crystalline secretions of bacteria, and on crystallization in general ——E Bejarano of Madrid, inspector general of the national public health service of the interior——U Fourmé, dean of the physicians of Bordeaux aged 95——Major Greenwood, an eminent practitioner of London, an authority on medicolegal matters, novelist and poet, aged 63——**W Findlay** of Glasgow, author of "Robert Burns and the Medical Profession," and "Poems of a Physician," aged 71——**C Mellinger**, professor of ophthalmology and chief of the eye clinic of the University of Basel, died suddenly, May 21——**F Boselli**, assistant at the maternity at Milan, aged 27——**L M Cowley**, professor of hygiene, legal medicine and toxicology at the University of Havana——**H Krabbe**, professor emeritus of anatomy and physiology at the Copenhagen Agricultural College, aged 87 His medical training rendered his comparative research on tenia in animals and man particularly important——Major **Blandeau** of Paris, in charge of a base military hospital

LONDON LETTER

London, June 4, 1917

The War

THE AMERICAN BASE HOSPITALS IN THE BRITISH SERVICE

The arrival of two American hospital units in England has already been announced The arrival of others in the near future, making six in all, is expected Some of the units have already left for France Each unit will take over a British base hospital and furnish a complete staff Another unit consists of twenty orthopedic surgeons from various parts of the United States under the command of Major Joel E Goldthwaite They have come over at the request of Col Robert Jones, under whom they will work in the British Isles

ANOTHER HOSPITAL SHIP TORPEDOED

The hospital ship *Dover Castle* was torpedoed in the Mediterranean at 6 o'clock and again at 8 30 on the same evening The whole of the patients and hospital staff were safely transferred to other ships, but of the crew six are missing and are believed to have been killed by the explosions This makes the fifth British hospital ship to have been torpedoed without warning since March 20, when the *Asturias* was attacked and thirty-one of the medical service and crew were killed, twelve, including a woman staff nurse and a stewardess were missing, and thirty-nine were injured.

Death from Eating Rhubarb Leaves

The curtailment of food supplies due to the war has led to a number of suggestions as to the use of various articles which do not usually enter into the diet of our people Some of these suggestions, of which a number were given in a previous letter (The Journal, May 12, 1917, p 1421) are excellent, but one has had unfortunate results Several persons became seriously ill as a consequence of following the advice to cook and eat rhubarb leaves, which were declared to be an excellent substitute for spinach, and some died One case occurred in a clergyman whose death was the subject of a coroner's inquest. According to the evidence of Mr J Webster, pathologic chemist at St Mary's Hospital, traces of oxalic acid were found in the internal organs Oxalic acid was present in the rhubarb leaves in the form of oxalate potassium and calcium oxalate, there being approximately 10 grains of each to the pound Dr B H Spilsbury, the pathologist, who made the necropsy, said that death was due to coma consequent on poisoning from the oxalic acid contained in the leaves In reply to the coroner, who asked whether the quantity present in the leaves was injurious, he said that in the ordinary way it might not be sufficient, but it was a borderline amount and might affect some persons more than others Asked whether the public should be in any way alarmed about using rhubarb stalks, he said that he did not think so, as there would have been many cases of poisoning if there was any harm in the stalks But he gave the warning that soda should not be used in cooking them This had been advised as an economy for sugar As an article in *Nature* shows, poisoning by rhubarb leaves is not new Seventy years ago a woman in Chelsea boiled rhubarb leaves as a substitute for spinach, and three persons who ate of the dish became ill In the *Transactions* of the Horticultural Society for 1848, Solly showed that nearly twice the amount of organic and inorganic matter is present in rhubarb leaves as in the stalks For more than 100 years the stalks have been extensively used in this country as a substitute for fruit, and only in rare cases of idiosyncrasy have any ill effects been observed

Bubonic Plague in England

The steamship *Sardinia*, from Eastern ports, arrived at Gravesend, May 2 Between April 27 and May 2, five cases of bubonic plague with three deaths had occurred among the crew Two further cases occurred after arrival at Gravesend The patients were removed to a hospital The cases were limited to the crew of the vessel The ship was ordered to a mooring station where the cargo was discharged into barges under careful supervision, and precautions were taken to prevent access of rats from the ship to the shore Complete fumigation was carried out and the ship has since sailed

A Ministry of Health

The desirability of creating a ministry of public health, which would coordinate the various health services now in existence under a cabinet minister, is being discussed. The Association of Municipal Corporations has passed the following resolution

> Inasmuch as the conservation and improvement of the public health call for the exercise of wide powers of local government touching the lives of the people at many points and involving questions not only of public medicine but also of engineering, economics and finance, and as these powers have for many years been entrusted to publicly elected bodies under the supervision and regulation of the Local Government Board and under this system there has been a steady improvement in the health of the people, this council is of opinion that if any further consolidation of public health or extension is desired it should be attained by development of the present organization and the recognition of the Local Government Board as the central public health department

The Women's Cooperative Guild, in a memorandum on the national care of maternity, has put forward the following demands 1 The immediate creation of a ministry of health 2 The provision of adequate government grants to stimulate the work of local authorities and provide a maternity allowance of $2 50 per week for two weeks before and four weeks after confinement for all women whose resources are below the income tax limit of $800 per year This would amount to making the care of maternity a function of the state A deputation from the Panel Medico-Political Union (the official organization of the panel physicians) has been received by the president of the Local Government Board in regard to the proposed ministry of health The chief point emphasized by the union was the necessity of guaranteeing free choice of physician, and it was pointed out that general practitioners were determined in their opposition to a whole-time service The president in his reply applauded the desire to maintain individualism in practice and to give free choice of physician, and did not favor a whole-time service

PARIS LETTER

Paris, May 24, 1917

The War

THE CARE TO BE ACCORDED PATIENTS SUFFERING FROM LEG WOUNDS

At one of the recent meetings of the Surgical Society of Paris, Chevrier, hospital surgeon, gave an interesting talk on the special care to be given patients with leg wounds These patients must not stand on their feet until their wounds have entirely scarred over, for this position, on account of the unfavorable conditions it imposes on the venous circulation, hinders the process of granulation and thus retards cicatrization However, this prolonged confinement to the bed must not be simply a passive and negative treatment. The time should be actively employed in preparing the patient to get up This preparation consists in (1) the correction of the posture of the injured member, (2) the exercising of the muscles, and (3) the strengthening of the joints It is important from the standpoint of posture not to allow the patients to assume faulty positions of the thigh, lower leg or foot which it would be necessary to correct later, and which sometimes could be corrected only with great difficulty

Chevrier proposed a series of efficacious measures to counteract these faulty postures These measures were raising the foot higher than the head, putting a sack of sand on the knee, keeping the foot at a right angle, elastic traction etc While the patient is confined to the bed, the muscles and the joints should be strengthened by systematic and judicious exercise The patient's wounds having scarred over, his muscles having been strengthened and his joints having been made supple, he is ready to leave the bed, but before he is allowed to walk freely he must be prepared for it This preparation, which is for the purpose of aiding the patient to find again his sense of equilibrium, sometimes consists simply of assuring the examiner that this sense has not been lost and sometimes it takes on a therapeutic aspect and covers a variable period, which is, however, usually short The verification comprises two tests the test of the suppleness and the test of the strength of the injured member The test of suppleness consists in having the patient assume the position of attention" with heels together and feet outspread He is then given the order to crouch keeping his feet flat on the floor If he does not crouch at least half way he should not walk yet The test of his strength consists in having him raise alternately one leg then the other as in marking time. If the patient cannot balance himself on one leg he cannot walk normally without his knees giving way, since each step in the act of walking requires unilateral support for a fraction of a second If the tests for ascertaining the suppleness and the strength of the leg do not result satisfactorily, Chevrier changes the method of preparation and gives the exercises a more therapeutic character This consists in the use as a form of gymnastics of the two exercises just mentioned—crouching repeated several times a day in series of thirty or forty movements and marking time which should gradually change to a flexion of the thigh on the pelvis until it forms a right angle, with the lower leg pendent

Owing to this practice of not getting up too soon after the cicatrization of the wound and the care taken to exercise the muscles and strengthen the joints, there is no necessity for canes and crutches unless there is such noticeable shortening of the leg as not to permit the direct or normal support One avoids thus numerous troublesome consequences which arise from the use of crutches and from patients getting up too early such as permanent demiflexions of the knee, stiffness ankyloses and clubfoot.

As for the treatment of rebellious musculotendinous clubfoot by means of elastic traction, etc., Chevrier performs tenotomy of the Achilles tendon under local anesthesia This is a strictly subcutaneous and not an open tenotomy After a tenotomy is performed the foot is immobilized in a plaster cast being allowed to bend comfortably beyond the right angle The cast does not extend beyond the knee The patient should walk with this apparatus and keep it on for three or four weeks Following this period, after the apparatus is removed, the patient will remain in bed for a time while the foot is massaged and the joints are strengthened by exercising Only at the end of two weeks will the patient be permitted to walk freely

Dr Broca hospital surgeon and associate professor of the Faculty of Medicine at Paris after having expressed his approval of Chevrier's advice in regard to patients suffering from leg wounds remaining in bed remarked that with respect to the treatment of clubfoot by tenotomy the lengthening of the Achilles tendon by a Z incision is much preferable to the transversal tenotomy As the result of the latter operation one often observes a wabbling foot, owing to lack of proper cicatrization. This opinion is shared by Delbet, Walther and Mauclaire. Chaput however, who has performed a large number of subcutaneous transversal tenotomies has never observed wabbling feet as the result of this operation. He thinks that this infirmity is caused by the fact that the patients are not kept sufficiently quiet They should be kept quiet for three weeks at least

LARGE WOUNDS OF THE FOOT

Quenu has made a report to the Surgical Society of Paris containing observations of thirty foot wounds treated in the hospitals by Chalier of Lyons In one of these cases, the soft parts alone were concerned In the twenty-nine others osteo-articular wounds were treated Quenu insists particularly on the distinction being made between the wounds of the anterior tarsus and of the posterior tarsus The former are much less grave than the second. The thirty wounds of the foot or instep observed by Chalier resulted in three deaths (one from tetanus, two from gas gangrene) ten total mutilations (amputations of the lower leg), four partial mutilations (partial amputations of the foot), and thirteen recoveries without mutilation. These statistics emphasize the seriousness of wounds of the foot and instep, as observed at the front in contrast with those which are observed in the interior These were selected cases, for those patients suffering from total or partial crushing of the foot had been eliminated Nevertheless, Quenu calls attention to the fact that, owing to circumstances Chalier was not able to operate on these patients except at the secondary infectious period, whereas in the case of the foot as much, if not more than elsewhere, prompt intervention is the prerequisite of success

Delbet, professor of the surgical clinic of the Faculty of Medicine at Paris, has observed that cases of shattering of the posterior tarsus with crushing of the calcaneum are exceptionally serious In such cases one must not carry to extremes the principle of conservation It is sometimes better to amputate than have the patient run grave risks in order to preserve a foot which will be of no use When should one amputate? That is a question which is not yet quite settled and which, it would seem, deserves discussion Quenu has tried to rehabilitate Chopart's operation, but Delbet has seen this operation as performed by other surgeons when it yielded deplorable results

Schileau hospital surgeon and associate professor of the Faculty of Medicine of Paris, has had an opportunity of observing thirty cases of foot wounds, and from this experience he has gained the impression that these wounds are not so serious as Quenu maintains Without performing an operation immediately but just waiting, not mutilating, but only watching the indications of the present hour, allowing the restoration process to operate in the large warm baths of serum and phenol solution, he obtained the remarkable result that not one of his patients lost a foot or the use of a foot

Chaput hospital surgeon of Paris obtained, on the whole, very good results in the treatment of gunshot wounds of the foot. He had to amputate in only two or three cases, and these patients were inveterate alcoholics who came to him with gangrene of the foot and even of the leg

Potherat, hospital surgeon of Paris, thinks that, in order to appreciate the seriousness of foot wounds caused by war projectiles there is no use of making a comparison between what one sees at the front and what one sees at the rear At the rear foot wounds, often multiple foot wounds, appear less grave and conservation carried to the utmost limits produces the most encouraging results At the front, foot wounds from the outset are serious The reasons for this are chiefly the anatomic disposition of the foot, and the fact that synovial tendinous or articular sheaths abound which are particularly favorable to infection The fact that foot wounds become serious at the outset leads to early partial or total amputations at the front. When the patients reach the rear they no longer have foot wounds these have been amputated It goes without saying that those who succumb before or after having the foot amputated are also excepted As for the operations in which these wounds constitute an indication Protherat recommends highly in cases in which total amputation of the foot is necessary that Syme's amputation be used which according to him offers great advantages It is an easy operation for a surgeon, rapid, requiring the removal of little of the soft skin of the foot It can be carried out even after infection has set in It is easy to adjust an apparatus after recovery, in fact, it can be adapted to the requirements of any apparatus It produces only a slight shortening of the leg This operation is therefore much superior to amputation of the lower leg

J-L. Faure hospital surgeon and associate professor of the Faculty of Medicine at Paris, has stated that, even as viewed in the territorial hospitals wounds of the posterior tarsus are serious wounds They are especially serious when the astragalus is affected. When the superior and inferior astragaloid joints have been opened, particularly the superior astragaloid joint which is the tibiotarsal joint, almost always the evolution of the wounds leads to astragalectomy, sometimes followed by amputation of the lower leg after months of suffering and fruitless attempts at conservation Faure thinks, moreover, that one must not go to extremes in the matter of conservation, and that often a good amputation of the lower leg is preferable to certain irregular operations which one is induced to perform on the foot, after which the patients walk only poorly

Kirmisson hospital surgeon and professor of the surgical clinic for children's diseases of the Faculty of Medicine at Paris, thinks also that an important distinction should be made between wounds of the anterior and the posterior tarsus The latter are much more serious in connection with the crushing of the calcaneum and the astragalus and the opening of the large joints of the posterior tarsus As for the partial amputations of the foot Kirmisson is a strong advocate of the Chopart operation which he has seen give good results Of the other partial amputations of the foot, the tibiotarsal and inferior artragaloid disarticulations and the Pirogoff amputations are also capable of producing excellent results, provided one has supple cicatrices and there is sufficient flesh around the wound This opinion is shared by Broca

Marriages

William Bradford Blanchard, M D, Framingham, Mass, to Miss Bertha Hazel Barker of Meriden, Conn, June 4

Bernard Louis Plouffe, M D, Webster, Mass, to Miss Cecilia Clare Delhanty of Southbridge, Mass, June 4

Roy Woodhams, M D, San Francisco, to Miss Beryl Dewey of Healdsburg, Calif, at Santa Rosa, Calif, May 18

Frank Roy Stewart Missner, M D, San Francisco, to Eva Lillian Durgin, M D, Cupertino, Calif, June 3

Philip Haskell Sylvester, M D Newton Center, Mass, to Miss Dorothy Young of Haverhill, Mass, June 2

Nicholas Ambrose Gallagher, M D, Malden, Mass, to Miss Anna B Bonzagni of Brookline, Mass, June 5

Arthur Acquilla Brindley, M D, Swanton, Ohio, to Miss Katherine Marie Thomas of Lansing, Mich, June 1

Edmund Joseph Burke, M D, LaSalle, Ill, to Miss Millie Christianson of Ettrick, Wis, at Chicago, May 28

William Crawford White, M D, New York, to Miss Caroline Ruth Taylor of Montclair, N J, June 1

Clyde Byron Terwillegar, M D, to Miss Olive Taul, both of Milford, Ohio, at Maysville, Ky, May 19

Charles Barnard Jackman, M D, Ottumwa, Iowa, to Miss Fawn C Reed of Delta, Iowa, April 25

George Nathaniel Pratt, M D, to Mrs Catherine Margaret Sawyer, both of Chicago, June 9

Harry Adkins Greenwald, M D, to Miss Verna Smith, both of Kettle Falls, Wash, May 29

Stewart J Niblick, M D, to Miss Elizabeth Janet McLuckie, both of Chicago, June 6

Ned David Miller, M D, Wichita, Kan, to Miss Amy Ferguson of Topeka, Kan, June 4

William John Kerr, M D, to Miss Dorothy Campbell Fish, at Los Angeles, June 19

James Walter Levering, M D, to Miss Alma G M Bains, both of Philadelphia, June 5

John B Flick, M D, to Miss Ardis Marie Tanguay, both of Philadelphia, May 3

John B Frisbee, M D, to Miss Marie Gatzmeyer, both of Butte, Mont, May 19

Herman H Farkas, M D, to Miss Pauline Silverman, both of York, Pa, June 3

Leonard W Brown, M D, to Miss Grace E King, both of Cleveland, June 6

Raymond Feser, M D, Chicago, to Miss Anita Choeco, May 23

Deaths

Major James Bourke, M C, U S Army, Washington, D C, Rush Medical College, 1897, a Fellow of the American Medical Association, aged 47, a graduate of the Army Medical School in 1893, and prior to that time an acting assistant surgeon in the army, whose most recent duty was that of lecturer on military medicine in the medical schools of Wisconsin and Michigan, who had been ill for the last three months and under treatment for nervous breakdown in the Walter Reed General Hospital and later at the Government Hospital for the Insane, Washington, D C, died at the Garfield Hospital, Washington, D C, June 17, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent

Edward Franklin Smith, M D, Richmond Hill, N Y, Bellevue Hospital Medical College, 1889, aged 49, a Fellow of the American Medical Association, and since April, 1901, the New York correspondent of The Journal, professor of physiology and hygiene in the Medical Department of Fordham University, New York, visiting and attending physician to the Manhattan Eye and Ear Hospital, and the Northwestern Dispensary, instructor in surgery in the New York Polyclinic, died at his home in Richmond Hill, June 15, after a prolonged illness

Albert Harris Hoy, M D, Chicago, Medical College of Ohio, Cincinnati, 1864, Rush Medical College, 1866, aged 74, for many years a practitioner of Chicago but latterly a resident of England, a medical cadet and later acting assistant surgeon, U S Army, during the Civil War, formerly a member of the State Medical Society of Wisconsin, who had been in ill health for a long time and whose condition had been rendered more grave by the shock due to the death of his wife and daughter in the sinking of the Cunard steamer *Laconia* in February last by a German submarine, died in London, June 9, from heart disease

Burnside Foster, M D, St Paul, Harvard Medical School, 1886, aged 55, a Fellow of the American Medical Association and a member of the American Dermatological Association, clinical professor of diseases of the skin in the University of Minnesota, and formerly lecturer on the history of medicine in the institution, for many years editor of the *St Paul Medical Journal,* a member of the staff of the City and County, St Luke's and St Joseph's hospitals, St Paul, died at his home, June 13

Samuel Benton McGlumphy, M D, Vermilion, S D, Rush Medical College, 1864, aged 79, for seven years assistant superintendent of the Nebraska State Hospital for the Insane, and later superintendent of the Dakota State Hospital, one of the founders, and for two years president of the South Dakota Territorial Medical Association, for ten years a member of the board of health and for one term coroner of Yankton County, and later coroner of Clay County, died at his home, May 25, from pneumonia

Rollin H Barnes, M D, St Louis, Marion Sims Medical College, St. Louis, 1897, aged 44, a Fellow of the American Medical Association, professor of proctology in the St Louis College of Physicians and Surgeons, editor and publisher of *The Proctologist*, died in the Polyclinic Hospital, New York, June 3, four days after an operation for appendicitis

Abraham Maas, M D., Neosho, Mo, Jefferson Medical College, 1862, aged 83, formerly a member of the Missouri State Medical Association, regimental surgeon of the One Hundredth Pennsylvania Volunteer Infantry during the Civil War, for one term mayor of Neosho, died in St John's Hospital, Joplin, Mo, May 26

Samuel McKee Crowell, M D, Charlotte, N C, University of Maryland, Baltimore, 1895, aged 63, a member of the Medical Society of the State of North Carolina, superintendent and medical director of the Crowell Sanitarium, Charlotte, died suddenly at his home, May 29

James Madison Duncan, M D, Calumet, Mo, College of Physicians and Surgeons, Keokuk, Iowa, 1870, Missouri Medical College, 1876, aged 63, for more than forty years a practitioner, died at his home, May 16, from cerebral hemorrhage

Thomas C McCleery, M D, Exeter, Neb, Rush Medical College, 1875, aged 65, a Fellow of the American Medical Association, local surgeon for the Chicago & Northwestern Railway, died in his office, May 1, from cerebral hemorrhage

Peter Hugh Smith, M D, Racine, Wis, Detroit College of Medicine and Surgery, 1895, aged 50, formerly a Fellow of the American Medical Association, a member of the State Medical Society of Wisconsin, died at his home, May 29

Robert Neilson, M D, Whistler, Ala, Medical College of Georgia, Augusta, 1854, aged 93, for more than seventy years a practitioner of Tuscaloosa County, Ala, died at the home of his daughter, near Eight Mile Station, May 17

Walter J B Tusson, M D, Covington, La, Tulane University, New Orleans, 1899, aged 44, formerly a Fellow of the American Medical Association, and an inspector for the state board of health, died in New Orleans, June 1

Franklin J Evans, M D., Iowa Falls, Iowa, University of Pennsylvania, Philadelphia, 1884, aged 71, a Fellow of the American Medical Association, died at the home of his daughter in Friday Harbor, Wash, about May 24

Daniel Lawrence Meehan, M D, Battle Creek, Mich, Lincoln Medical College, Lincoln, Neb, 1895, aged 49, formerly a member of the Nebraska State Medical Association, died at his home, May 22, from heart diesae

Francis Lavelle Smith, M D, Detroit, Mich, University of Michigan, Ann Arbor, 1902, aged 36, a Fellow of the American Medical Association, died in Grace Hospital, Detroit, May 22, from septicemia

James A Fergus, M D, Elm Springs, Ark., St Louis College of Physicians and Surgeons, 1905, aged 34, a member of the Arkansas Medical Society, died at the home of his mother in Elm Springs, May 7

Albert A Nicholls, M D, Edmonton, Alta , Manitoba Medical College Winnipeg 1902, aged 44, a member of the Canadian Medical Association, died at his home, February 16, from angina pectoris

Oliver N Ainsworth, M D, Spearfish, S D College of Physicians and Surgeons, Keokuk, Iowa, 1878, aged 65, formerly a Fellow of the American Medical Association, died at his home, May 21

Forest G Cosby, M D, Columbus, Ga , University of Louisville Kentucky, 1894, aged 52, for many years a practitioner of Dixon, Ky , died at his home in that city, April 24, from organic heart disease

Daniel Goodenow, M D, Maynard Mass , Dartmouth Medical School Hanover N H 1889, aged 54 while on his way from Florida to New York, died at sea, March 14, from cerebral hemorrhage.

George Mattocks Frost, M D, Hudson Ohio, Western Reserve University Cleveland, 1894 aged 45, a Fellow of the American Medical Association, died at his home, April 14 from pneumonia.

Dallas M Taylor, M D, Amsterdam, N Y , Long Island College Hospital Brooklyn 1874 formerly a member of the Medical Society of the State of New York, died at his home, about May 30

Charles V B Poole, M D, Broadview Mont., Northwestern University Medical School Chicago 1903, aged 59, died in St Vincent's Hospital Billings Mont., May 31, from abscess of the brain

Walter Clark Haupt, M D, New York, Johns Hopkins University Baltimore 1914 aged 30 a member of the staff of the Neurological Institute New York, died at his home, June 4

Gilbert Edward Wallace, M D., Forked River N J , Hahnemann Medical College Philadelphia 1896, aged 43 died at his home March 15 two and half hours after an accidental injury

Jonathan L Plummer, M D, Peoria Ill , St. Louis College of Physicians and Surgeons 1898 aged 69 a resident of Peoria for forty-six years, died in McLean Texas, May 16

Charles Emerson Philoon, M D., Auburn, Me Medical School of Maine, Brunswick, 1867 aged 76, a Fellow of the American Medical Association, died at his home, May 18

James W Crowley, M D, Newport, Ky Cincinnati College of Medicine and Surgery 1896, aged 64 a Fellow of the American Medical Association, died at his home, May 9

Benjamin Hopkins Reed, M D, Marshalltown, Iowa, American Medical College St. Louis 1903, aged 46, died at Flat River Mo May 26 from cerebral hemorrhage

Johnson W Gordon, M.D, Bowerston O , Columbus, Ohio, Medical College 1881, aged 64 visiting surgeon to St. Luke's -Hospital, Niles, Mich , died at his home May 9

David C Gore, M D, Marshall Mo , Missouri Medical College 1876, aged 64, a Fellow of the American Medical Association died suddenly at his home May 5

Myron Douglas Green, M D., Cincinnati, Miami Medical College Cincinnati 1875 aged 65, a Fellow of the American Medical Association died at his home, May 15

Frederick Wilhelm, M D, Akron, Ohio, University of Vienna Austria 1892 aged 50, died in the People s Hospital Akron June 5 from cerebral hemorrhage

S M Davis, Warren Ark. (license Arkansas, 1903) , aged 77, a Confederate veteran, for many years a druggist of Warren, died in that place about May 8

Robert Scott Stewart, M.D, Ironton, Ohio, Kentucky School of Medicine, Louisville, 1897, aged 54, died at his home in South Webster Ohio, May 19

Sylvester L Ellis, M.D, La Plata Mo , College of Physicians and Surgeons, Keokuk, Iowa, 1880, aged 82, died at his home, May 23 from nephritis

Joseph Bedard, M D, Muskegon, Mich University of Victoria College Coburg Ont., 1874, aged 64, also a druggist, died at his home, May 25

John Bailey Sullivan, M D, Pittsburgh, Pulte Medical College, Cincinnati 1888, aged 66, died in the Homeopathic Hospital, Pittsburgh, May 20

Gustav E Hanzig, M D, Ellendale, Okla., Hahnemann Medical College, Philadelphia, 1888 aged 65, died at his home, May 22

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

THE RUSSELL EMULSION AND THE RUSSELL PREPARED GREEN BONE

Report of the Council on Pharmacy and Chemistry

The following report on ' The Russell Emulsion" and The Russell Prepared Green Bone,' marketed by the Standard Emulsion Company was submitted to the Council by a referee The Council endorsed the report and authorized its publication W A PUCKNER, Secretary

The Russell Emulsion is put up in a neat package and advertised in an attractive pamphlet on the cover of which we are told Truth Always Justifies The Superlative Degree ' As what follows in the booklet and in the printed circulars certainly does not lack superlatives this is doubtless a warning

In addition to the pamphlet and circular advertising, the product seems to be systematically boomed by a lecture scheme in which one Dr Hague talks before medical societies and distributes advertising matter The lecture is succeeded by a follow up letter scheme through which matter is sent to members of the society Hague ostensibly discusses lime starvation in tuberculosis" but medical societies soon learned to estimate his work as essentially to advertise the Russell products Last April the Medical Society of the State of Pennsylvania sent out a circular letter to its county organizations on the subject of the Russell-Hague propaganda which opens in this way

> You have doubtless received a letter from Dr William Grant Hague of New York, offering to address your county society on Tuberculosis After due investigation it is respectfully suggested that it may not be desirable to ask him to address your society "

The statements in the pamphlet and circular published are typical of the whole method of exploitation For example, can such claims as these be surpassed by the veriest quack?

> SCIENCE cannot improve the means employed in producing THE RUSSELL EMULSION
>
> GENIUS has not devised better methods than are used in manufacturing THE RUSSELL EMULSION
>
> MONEY cannot buy better products than are used in THE RUSSELL EMULSION
>
> ' EXPERIENCE cannot suggest a more nutritious combination of fats than we use in THE RUSSELL EMULSION

The emulsion is said to be made of equal parts of beef-fat, coconut peanut and cottonseed oils, held in suspension by albumin The latter we are told is applied to each globule of the emulsion by an elaborate technical process' devised by Dr Russell The mixture is everywhere spoken of as a "physiological" emulsion but the word is always in quotation marks Why it is called "physiological- is not clear, but the term may be counted on to impress the unthinking or the unscientific

Numerous false and exaggerated statements are made about this 'physiological" emulsion with reference to food value. For instance

> The nutritional value of fats differ the nutritional value of these fats and their increased efficiency by combination over all others have been determined by extensive clinical observation.

And also

> 'The Russell Emulsion is approximated in food value by no other emulsion or food product in existence
>
> A physiological emulsion is a predigested food It is absorbed with little assistance from the digestive juices and with no waste of energy It is therefore, the ideal food

These are sample statements found in the pamphlet and accompanying circular A dozen or more pathologic conditions are mentioned in which this "ideal food" is specifically indicated, but we find, also, this curious statement "Patients can rarely take this dose [speaking of the maximum dose of 2 ounces night and morning] for more than three or four weeks without showing symptoms of over-feeding" This unguarded remark about an ingestion of 48 grams of fat daily prompts one to ask what is wrong with the "ideal predigested food"

Russell is wedded to the idea that "lime starvation" is the main factor in tuberculosis, and insists on the importance of large amounts of fat for the "lime starved"

> 'Dr Russell was the original interpreter of the Lime Starved State and originated The Lime Starvation Treatment in tuberculosis He also first pointed out and emphasized the therapeutic importance of regarding the combination of lime phosphate and casein, as brought down by the rennet enzyme, as a chemical union"

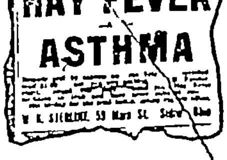
This overworked lime-starvation theory certainly lacks any tangible confirmation (see in this connection a recent paper by Halverson, Mohler and Bergeim, in The Journal, May 5, 1917), and to urge it to promote the sale of a fat preparation is preposterous On the uninitiated the exaggerated pseudo-scientific language of the pamphlet and circular advertisement will probably make some impression Unfortunately such things count not only with the layman who, having no technical knowledge of physiology, cannot be expected to weigh the evidence, but also with those medical men who, while scientifically educated, are influenced by unscientific claims when plausibly presented The pamphlet is a striking example of a style which is dangerous because it smacks of science

The Russell Company sells also a mixture called "Prepared Green Bone," said to be made by partially digesting ground chicken bones with hydrochloric acid and pepsin and adding glycerin at the end of the digestion The product is a sticky, unappetizing looking mass put up in little earthenware boxes and advertised as a lime food, apparently to go along with the fat emulsion The greater value of a few glasses of milk daily is evidently overlooked

"The Russell Emulsion" and "The Prepared Green Bone" were declared inadmissible to New and Nonofficial Remedies

[Editorial Comment—There are always those who are ready to exploit the unfortunate tuberculous It is, unfortunately, a fact that many physicians accept as true, statements clothed with obscure and voluminous quasi-scientific verbiage Such men would laugh at the bald claim that the moon is made of green cheese When, however, one plausibly and with due solemnity, affirms that the nocturnal luminous earthly satellite is composed of an infinite aggregation of molecules of bewildering and awe-compelling complexity, built up from the recently discovered polypeptids, the whole being of a verdant tint, the person addressed looks impressed and opines that it sounds reasonable! The advertising for The Russell Emulsion and The Russell Prepared Green Bone is dangerous because it appeals to the thoughtless—layman and physician, alike]

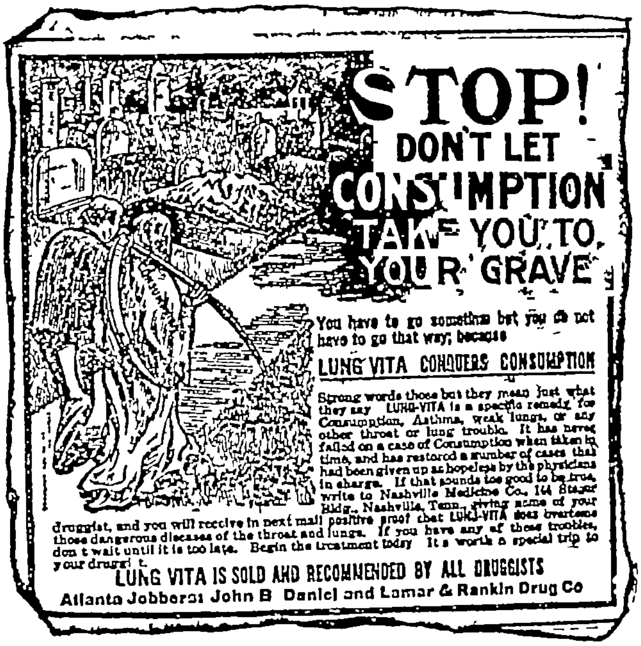
SOME MISBRANDED NOSTRUMS



HAY FEVER
ASTHMA

"Sterline's Asthma and Hay Fever Remedy" and "Sterline's Bronchial Elixir"—The National Chemical Co, Sidney, Ohio, was a trade name under which Webster K Sterline conducted the business of selling his "Asthma and Hay Fever Remedy" and his "Bronchial Elixir" The first product was analyzed by the federal chemists who reported that it was a water-alcohol solution containing potassium and sodium iodids, bromids and acetates, as well as some extractive matter from some laxative plant drug It was sold under the claims that it would cure asthma and hay fever These claims the federal authorities declared false and fraudulent and made knowingly, recklessly and wantonly "Sterline's Bronchial Elixir" was reported by the government chemists to be a solution of morphin, potassium citrate and aromatics in alcohol and water The claims that it would cure bronchitis and was a remedy for all affections of the mucous membrane were declared knowingly, recklessly and wantonly false and fraudulent Sterline would neither admit nor deny the charges but entered a plea of *nolo contendere* and was fined $75 and costs—[*Notice of Judgment No 4478*]

Lung-Vita—The government seized 16 dozen bottles of "Lung-Vita" that had been shipped from Tennessee to Wisconsin charging that the stuff was misbranded under the Food and Drugs Act The federal chemists reported that "Lung-Vita" consisted essentially of a petroleum oil, saponifiable oil and a solution containing sugar and glycerin, with a small quantity of benzoic acid The government authorities claimed that it contained no ingredients or combination of ingredients that would cure consumption or asthma or destroy tubercle bacilli, although these and many other claims were made for it. The claims were declared false and fraudulent and applied knowingly, recklessly and wantonly The Nashville Medicine Company, Nashville, Tenn, appeared and made claim to the property and consented to a decree of judgment of condemnation and forfeiture The court ordered the United States marshal to destroy the product—[*Notice of Judgment No 4511*]



STOP! DON'T LET CONSUMPTION TAKE YOU TO YOUR GRAVE

You have to go sometime but you do not have to go that way, because

LUNG VITA CONQUERS CONSUMPTION

Strong words those but they mean just what they say LUNG-VITA is a specific remedy for Consumption, Asthma, weak lungs, or any other throat or lung trouble. It has never failed on a case of Consumption when taken in time, and has restored a number of cases that had been given up as hopeless by the physicians in charge. If that sounds too good to be true, write to Nashville Medicine Co., 114 Stager Bldg., Nashville, Tenn., giving name of your druggist, and you will receive in next mail positive proof that LUNG-VITA does overcome those dangerous diseases of the throat and lungs. If you have any of these troubles, don t wait until it is too late. Begin the treatment today It s worth a special trip to your druggist.

LUNG VITA IS SOLD AND RECOMMENDED BY ALL DRUGGISTS

Atlanta Jobbers: John B Daniel and Lamar & Rankin Drug Co

"Arch Brand Nerve Tonic" and "Arch Brand Blood Remedy"—This, according to the label was made for and sold by the Arch Pharmacal Company, San Francisco, and the National Pharmacy Company of Oakland, Cal, which were charged by the government with misbranding and shipping the products in interstate commerce The federal chemists declared that the "Nerve Tonic" was a watery solution of sugar, hypophosphorous acid, salts of sodium, potassium, calcium and magnesium with indications of quinin and strychnin The claims that it was an effective remedy for nervous prostration and for nerve and brain diseases generally were declared false and fraudulent The "Blood Remedy" was found by the federal chemists to contain over 18 per cent alcohol, more than 31 per cent of sugar, with small amounts of potassium iodid, sarsaparilla and emodin-bearing drugs The claims that it was a cure for piles, scrofula, acute skin affections, and an effective remedy for rheumatism and blood diseases generally were declared false and fraudulent The company pleaded guilty and was fined $50—[*Notice of Judgment No 4477*]

Dust and Smoke—A dusty atmosphere is objectionable and unpleasant It irritates the nose and throat Smoke may be considered as a combination of the gases of combustion and of dust in the shape of carbon particles The air is sufficiently free from impurities, such as dust and smoke, practically everywhere except in manufacturing cities and in arid regions during windy periods—Asst Surg-Gen J W Trask *Public Health Reports*

Correspondence

POTENCY OF MENINGITIS SERUM

To the Editor —I desire to call attention to the statement appearing in your editorial, Epidemic Meningitis" (The Journal, June 2, 1917), in which you state that, according to experiments in England some of the meningitis serum as obtained under market conditions seems to be without sufficient virtue to have any curative effect and in this respect we are still at the mercy of the manufacturers unless fortunate enough to be able to secure the serum from institutions for research such as the Rockefeller Institution for Medical Research or the Research Laboratory of the Board of Health, New York City "

In a recent issue of The Journal, it was also stated that much of the serum manufactured by commercial laboratories was of doubtful potency I am quite sure that you will agree that such sweeping statements as these are without sound basis

As a matter of fact, based on the experience of many years in the Public Health Service in the inspection of establishments manufacturing biologic products, I unhesitatingly can state that the manufacture of biologic products in the well established commercial establishments is conducted by men of as high scientific training in their particular field as those supervising the manufacture of the same products in either the Rockefeller Institute or the New York City Laboratory, or any other institution

I think that neither in your statement, nor in the statements made by others, as to the inefficacy, in certain instances, of antimeningitis serum, has recognition been given to the factors most probably responsible for the unsatisfactory results

Moreover I know that a number of the commercial establishments not only use cultures obtained from the Rockefeller Institute and from the New York City Laboratory for the immunization of their horses, but also follow absolutely the methods used in those institutions for the standardization of their serums and if the methods used in those institutions are satisfactory it therefore follows that the methods used in the commercial establishments using the same are also satisfactory

When I was in England about eighteen months ago, I was informed by the medical officers that in those instances in which unsatisfactory results had been obtained with the serum some of which, by the way was furnished by a noncommercial laboratory in the United States the unsatisfactory results were attributed in part, to the use of serum from horses which had not been immunized with the particular strains of meningococci responsible for the infection It is my opinion that the unsatisfactory results that are sometimes obtained with antimeningitis serum can be attributed to several factors among these factors being late administration of the serum, administration of an insufficient amount of the serum faulty technic in administration, and what is probably of very great importance, serum prepared from horses immunized with a few strains of meningococci not including the so-called meta—and para—strains

Finally it should be borne in mind that the manufacture of antimeningitis serum in commercial laboratories is carried out under the supervision of the United States Public Health Service and that such statements as have recently appeared in The Journal at least imply that this supervision is *not* adequately performed which I am sure, you will agree is not the case

John F Anderson M D, New Brunswick, N J
Director, Research and Biological Laboratories, E R Squibb & Sons

[Comment —It would have been better if we had said simply this that according to reports in the medical journals it has been found that commercial meningitis serum may be of doubtful potency On several occasions statements have been made to the effect that the results expected were not obtained with the serum used (see particularly the discussion by Osler, Robb, Rolleston, Foster and Gaskell in the Royal Society of Medicine, Oct 19 1915 as reported in the *British Medical Journal,* Oct 23 1915 p 604 also the editorial statement in the same journal, May 27, 1916, p 753) Osler states directly that the main cause for want of success was *inert* serum In a discussion of the medical problems of the war, based on personal observations in England and France, Welch (*Bull Johns Hopkins Hosp*, 1917 28, 154) states that at first the results in cerebrospinal fever were very unsatisfactory, and that it was found that practically inert serum had been used both in Great Britain and in France, that serum was examined by Dr Simon Flexner and found to be worthless, and that with really good serum the results became extremely satisfactory While the factors enumerated by Dr Anderson may have been, and are of great importance there seems to be no doubt whatever that in some way worthless serum had found its way into the British army and navy, and that some at least of this serum came from America We are quite prepared to agree that the supervision of the U S Public Health Service of the manufacture of antimeningitis serum is performed as adequately and conscientiously as possible under the circumstances, but in view of the lack of definite standards for a polyvalent serum as antimeningitis serum at present is there necessarily is left a very considerable latitude for the manufacturer —Ed]

AN OUTLINE FOR CASE REPORTS

To the Editor —In the name of economy let us have some editorial regulation as to the form and manner of reporting cases and clinical statistics System uniformity conciseness and graphic contrasts make for saving of comprehension, of patience of time of space of printing, of white paper, and, above all for the securing of attention to invaluable data which under the most favorable circumstances, are tedious reading

The symptoms of a case I would urge should be uniformly contrasted thus (*a*) positive findings, (*b*) negative findings and (*c*) dubious uncertain or debatable points which an author finds it necessary to mention

There should be no difficulty and no objection in adopting a uniform method of recording such as the following (1) positive data which the reader needs to note and bear in mind (2) negative data for purposes of knowing what might have been expected but did not appear, and (3) discussion of phenomena or observations on which the mind remains suspended

Groups of cases or symptoms or other objects, phenomena or occurrences should be reported in percentages A busy reader however amiable should never be compelled to keep in mind the number of cases being discussed and how many of the number reported showed this or that feature It is most exasperating to hold the attention suspended while one hastily endeavors to calculate the percentages for oneself

J Madison Taylor, M D, Philadelphia

JUNIOR EMERGENCY MEDICAL OFFICERS FOR THE WAR

To the Editor —The need for physicians in the allied armies is so great and the mortality so high, that the medical schools will be unable to turn out medical men fast enough to replace those that are being wounded or killed If the war lasts for a considerable length of time we may be as depleted as the European countries are now The high mortality is proof that physicians are being used for work that does not require fundamental and extensive medical training work in which the product of the modern medical school is largely wasted The recognition of these facts has been too long delayed so that it is now time for action

What is needed is a large number of "emergency surgeons" When one considers the class of work done on the battlefield, where the fatality is greatest, one will realize that this requires physique and nerves, a technical knowledge of the relatively simple operative surgery and asepsis, of sanitation, of bookkeeping And very little else If the medical schools were ordered to direct their energies to the particular training needed for these purposes, in an intensive fashion, they could prepare inside of two years or less a large number of men who for this purpose would be practically as good as the men whose education now takes five years This would leave those of complete training and special skill for the more complicated work of staff positions, base hospitals, etc

The proposition would be for the government to enroll an adequate number of drafted men who have the right kind of preparation, for special courses as "junior surgeons" or "minor surgeons," to be commissioned at the completion of their course as junior lieutenants or ensigns for the war This would not entitle them to the right to practice outside of this special service in the war, but at the end of the war or when invalided, they would be given an opportunity to complete their medical education along the regular lines, and presumably at the expense of the government

The medical schools would be running two parallel courses one for the men enrolled for this special service, and the ordinary courses for those who are for any reason disqualified from service at the front

I hesitate to develop the details of this special education, which would require very careful study, but merely as a concrete illustration, I suggest tentatively that the ordinary subjects be treated thus

Subjects	Treatment
Gross, and especially regional anatomy	Fairly complete
Histology	Elementary
Embryology	None
Biochemistry	Elementary
Physiology	Elementary
Bacteriology	Fairly complete
Pathology	Fairly complete, with emphasis on surgery
Hygiene	Complete
Pharmacology	Selective
Surgery	Intensive
Medicine	Elementary
Specialties	Sui generis

The present plans are inadequate, not only quantitatively, but also in principle The situation is a new and an original one, and has to be met by new and original measures—or not at all Torald Sollmann, M D, Cleveland

JUSTICE TO THE PHARMACIST

To the Editor —I must express my pleasure and gratification at the excellent and timely editorial entitled "Justice to the Pharmacist," The Journal, June 16, p 1822

As you already know from Mr England's letter occurring in the same issue of The Journal, page 1864, American pharmacy feels that it is deprived of the fullest opportunity to render that competent and specialized pharmaceutic service of which it is capable No group of men can realize more thoroughly than the medical men how valuable the service of pharmacists could be made under a proper status You have shown a most commendable and just insight into the situation, and your advocacy of the movement to give pharmacists a rank commensurate with the importance of the service they render and can render is greatly appreciated not only by me personally, but by the American Pharmaceutical Association

Frederick J Wulling, Minneapolis,
President, American Pharmaceutical Association

To the Editor —The letter of Mr J W England, secretary of the council of the American Pharmaceutical Association (The Journal, June 16, 1917, p 1864) to which your clear and forcible editorial comment gives a just endorsement, calls attention to a matter in which physicians should actively interest themselves, not only as medical men, but also as patriotic American citizens

The war into which our country—after all possible delay and every effort to preserve an honorable peace—has been forced, is going to be, as the President so well says, "a grim business" Back of it must be sentiment and enthusiasm, but in its conduct cold, practical common sense is demanded. The necessity of the best attainable medical and hygienic aid to the fighting arm, both in training camps and on the field of battle, is no longer at issue The importance of the pharmacist as first aid to physician and surgeon ought not to require emphasis Not only is the technical skill and knowledge of the trained pharmacist required in the procurement and preparation of medicines, antiseptic solutions and the like, but also, with but slight intensive preparation, it could be made highly useful in the hospital wards and in the clinical and research laboratories

In order that this varied usefulness may be developed to the highest point, and thus contribute to the most efficient conduct of the war and to the best possible care of the sick and wounded, the type of men attracted to the pharmaceutic service of the army and navy should be high, and their merit should be adequately recognized by their commissioning as officers It might be well if physicians would write to the Medical Department of the United States Army in support of the movement which has been initiated by the American Pharmaceutical Association

Solomon Solis Cohen, M D, Philadelphia

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed Every letter must contain the writer's *name and address*, but these will be omitted, on request

ERCOLANI'S SUPRARENAL TREATMENT IN NEPHRITIS

To the Editor —In The Journal June 2, 1917, p 1670, there was an abstract of an article on 'Suprarenal Treatment in Nephritis," by P Ercolani, from the *Gazetta degli Ospedali e delle Cliniche* This journal is not in the library here, and I should like to know the method of administration of the epinephrin and in what quantities it is given Can you give me this information?

Thomas H Kelly, M D, Cincinnati

To the Editor —I am interested in the article "Suprarenal Treatment in Nephritis," abstracted recently in The Journal. I should like to have full particulars in reference to size of dose, how often and how administered, and any special preparation Should I expect increased blood pressure while giving epinephrin?

W C Ramsey, M D, Kent, Ohio

Answer —Ercolani does not describe his technic, referring for this to his previous works on the subject in the *Rivista medica* His first works date from 1910, since which time he has published reports nearly every year He mentions parenthetically in the article reviewed in The Journal, June 2, speaking of the objection that epinephrin might induce arteriosclerosis, that he has treated elderly persons of 80 with uremia with 60 drops a day of the solution of epinephrin, without interruption over long periods and without the slightest inconvenience The pulse seemed to be more elastic and softer while the epinephrin was being taken He also cites a writer who reported the case of an asthmatic woman who could take up to 120 drops of the 1 1,000 solution at a time, and who took forty-four bottles in the course of three years (ounce bottles), one hypodermically Necropsy showed no more changes in the walls of the arteries than would be expected at her age Ercolani cites Paoloantonio's report of the use of epinephrin in thirty cases of scarlatinal glomerular nephritis, published in the *Policlinico,* 1913, **20,** 751 He says that he followed Ercolani's suggestions and mentions giving 2 or 3 drops of the 1 1,000 solution of epinephrin for each year of the child's age He stated that the administration can be by the subcutaneous route, or by the mouth in doses of from 10 to 20 drops a day for a child between 5 and 10, according to the severity of the symptoms

Increase in Industrial Accident Mortality in 1916—The recently compiled statistics of the Metropolitan Life Insurance Company during the year 1916 on 9,000,000 white lives insured in its industrial departments, concludes that the accident rate for the working classes of the United States increased five per hundred thousand living over the mortality showing for 1915 This condition is contrary to the more recent tendency, and may be the result of the increased activity in industry and in the speeding-up processes incident to war conditions The mortality from automobile accidents and injuries shows far the largest increase in the rate for any of the specified cause of accidental mortality

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery July 9 Chairman Dr S W Welch, Montgomery

Alaska Juneau, July 3 Sec Dr H C DeVighne, Juneau

Arizona Phoenix July 2-3 Sec Dr John W Thomas 305 Goodrich Bldg Phoenix.

California San Francisco July 10 Sec Dr Charles B Pinkham 529 Forum Bldg, Sacramento

Colorado Denver, July 3 Sec. Dr David A Strickler, 612 Empire Bldg Denver

Connecticut Regular New Haven July 10-11 Sec Dr Charles A. Tuttle 196 York St New Haven

Connecticut Eclectic New Haven July 10 Chairman, Dr John W Fyfe Saugatuck

Connecticut Homeopathic New Haven July 10 Sec, Dr Edwin C M. Hall 82 Grand Ave. New Haven

District of Columbia Washington July 10 Sec Dr Edgar P Copeland The Rockingham Washington

Indiana Indianapolis July 10-12 Sec, Dr W T Gott 84 State House Indianapolis

Maine Augusta July 5-6 Sec. Dr Frank W Searle 776 Congress St Portland

Massachusetts Boston July 10-12 Sec. Dr Walter P Bowers, Room 501 No 1 Beacon St, Boston.

Nebraska Lincoln July 2 Sec., Dr E. Arthur Carr 516 Bankers Life Bldg Lincoln

New Hampshire Concord, June 25-26 Sec Dr W T Crosby Beacon Bldg Manchester

New Mexico Santa Fe July 9 Sec. Dr R. E. McClanahan, U S Naval Hospital Las Animas Colorado

New York Albany Buffalo New York and Syracuse June 26-29 Sec. Dr Willard J Denno Education Bldg, Albany

North Dakota Grand Forks July 3 Sec Dr George M Williamson Grand Forks

Oklahoma Oklahoma City July 10-11 Sec. Dr R V Smith Tulsa.

Pennsylvania Philadelphia and Pittsburgh July 10-12 Sec Mr Nathan C Schaeffer State Capitol Harrisburg

Rhode Island Providence, July 5 Sec. Dr Gardner T Swarts 315 State House Providence.

South Dakota Deadwood July 10 Sec. Dr Park B Jenkins, Waubay

Utah Salt Lake City July 2-3 Sec. Dr G F Harding 407 Templeton Bldg Salt Lake City

Vermont Burlington July 10-12. Sec., Dr W Scott Nay Underhill.

Washington Seattle July 3-5 Sec. Dr C N Suttner Walla Walla.

West Virginia Charleston July 10 Sec. Dr S L. Jepson Capitol Bldg Charleston.

Wisconsin Milwaukee, June 26 Sec Dr J M Dodd, 220 E 2nd St. Ashland

Wyoming Laramie June 27-29 Sec Dr H E McCollum Laramie.

Higher Requirements in Montana

At a meeting held April 3 1917, the Montana State Board of Medical Examiners adopted a resolution which requires that all applicants who graduate after July 1 1917, and who seek a license to practice medicine in that state, must present a diploma issued by a medical school rated in Class A by the American Medical Association. This action establishes a minimum standard of preliminary education as follows: For applicants graduating prior to Jan 1, 1918 a four-year high school education, for those graduating in 1918 to 1921 inclusive, one year of premedical college work, including courses in physics chemistry and biology, and for all candidates graduating in 1922 and thereafter two years of premedical college work including the sciences named.

The board also adopted a resolution requiring that, after April 3 1917 all applicants who have graduated from a medical school outside the United States shall be required to present evidence of having attended at least one full course of study in a medical school in the United States rated in Class A by the Council on Medical Education of the American Medical Association.

Alaska's New Medical Practice Act

At the recent session of the territorial legislature of Alaska the medical practice law heretofore in effect was repealed and a new law enacted. The new law provides that examinations be held in March and September each year. Members of the board are appointed for a term of four years. The definition of the practice of medicine has been made more comprehensive. The clause exempting osteopaths from the provisions of the act was cut out. The board was given authority to revoke licenses for unprofessional conduct. The requirements of preliminary education are to be those held by the Association of American Medical Colleges at the time the candidate graduated. This means that at present a four-year high school education is required. After Jan 1, 1918 applicants must show that before beginning the study of medicine they completed in addition, one year of college work, including courses in physics chemistry and biology. After Jan 1 1922 in addition to the high school education the applicant must have completed two years of college work before entering on the study of medicine. The new law gives the board authority also to require applicants to have completed a year's internship in an approved hospital before being eligible for the license. In grading the papers of applicants the law provides that one per cent may be allowed for each year of practice after the first two years.

Colorado April Examination

Dr David A Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written examination held at Denver April 3, 1917. The examination covered 8 subjects and included 80 questions. The percentage required to pass was 75. Thirty nine candidates were examined of whom 35 passed including 30 osteopaths, and 4 failed, including 2 osteopaths and 1 drugless practitioner. Ten candidates were licensed through reciprocity. The following colleges were represented

College	PASSED	Year Grad	Per Cent
Hering Medical College		(1906)	*
Kansas Medical College		(1900)	80.2
Tulane University of Louisiana		(1916)	85
Woman's Medical College of Pennsylvania		(1914)	85.3
Vanderbilt University		(1916)	83.5
	FAILED		
St Louis College of Physicians and Surgeons		(1915)	65.5

* No grade given

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
American Medical Missionary College	*	(1906)	Michigan
Rush Medical College		(1914)	Illinois
Tulane University of Louisiana	(1906) Arkansas	(1908)	Alabama
University of Maryland		(1906)	Maryland
Boston University		(1905)	Mass
Harvard University		(1910)	Maine
Barnes Medical College		(1899)	Texas
Ensworth Medical College		(1905)	Missouri
Kansas City Hahnemann Medical College		(1903)	Kansas

District of Columbia April Examination

Dr Edgar P Copeland, secretary of the Board of Medical Supervisors of the District of Columbia, reports the oral and written examination held at Washington, April 10-12, 1917. The total number of subjects examined in was 16, total number of questions asked 80, percentage required to pass 75. Ten candidates were examined of whom 6 passed, and 4 failed. The following colleges were represented

George Washington University (1910) 82 (1916) 79.7 80.5 86.1		
Baltimore Medical College	(1909)	76.1
University of Maryland	(1915)	83.5
FAILED		
Baltimore Medical College	(1905)	68.6
College of Phys and Surgs., Boston*	(1916)	69.9
Jefferson Medical College	(1912)	68.1
Meharry Medical College	(1916)	71.7

* This college has been reported not recognized by the Massachusetts Medical Society

Nevada May Examination

Dr Simeon L. Lee secretary of the Nevada State Board of Medical Examiners, reports the written examination held at Carson City May 7-9, 1917. The examination covered thirteen subjects including 100 questions. The percentage required to pass was 75. Six candidates were examined, all of whom passed, and 11 candidates were licensed through reciprocity. The following colleges were represented

College	PASSED	Year Grad	Per Cent.
College of Phys. and Surgs., San Francisco		(1904)	83.5
Cooper Medical College		(1894)	87.4
University of Louisville		(1916)	91.3

Medicolegal

Not Entitled to Artificial Arm as "Apparatus"

(Kunasek vs New York Consolidated Card Co (N Y), 162 N Y Supp 361)

The Supreme Court of New York, Appellate Division, Third Department, answers in the negative a question submitted by the state industrial commission as to whether claimant Kunasek, who had lost his right arm in an accident and had been awarded full compensation under the workmen's compensation law, was entitled in addition thereto to an artificial arm, which he demanded during the first sixty days after his injury The court says that this brought to it the question whether an artificial arm is an 'apparatus," within the meaning of the provisions of Section 13 of the law That a natural arm is not to be considered as an "apparatus" must be clear to any one who stops to consider the matter for a moment It seems clear that the statute in this case does not contemplate anything more than the apparatus necessary or proper for the first sixty days of intelligent and practical treatment of the injured employee, and there can be no justification for holding that an artificial arm is an apparatus any more than the natural arm would be an apparatus An implement would certainly not be defined so as to include an artificial arm, and there is no occasion for construing apparatus in a broader scope, the two words being practically synonymous as generally used No doubt the claimant could have called for any apparatus which was necessary or proper in the treatment of his health or strength during the sixty days following his injury, and it would have been the duty of the employer to supply them, under the conditions prescribed by the statute, but to contend that the claimant could by a mere arbitrary demand impose the duty of supplying a new arm, when he had been fully compensated for the old one, was wholly without warrant in law It was not necessary to consider the question of whether the artificial arm could have been used within sixty days of the injury

Improper Basis for an Opinion

(Switzer vs Baker et al (Ia), 160 N W R 372)

The Supreme Court of Iowa, in reversing a judgment obtained by the plaintiff for alleged personal injuries from having been struck by an automobile, says that on the subject of the plaintiff's physical condition at the time of the trial a physician was examined as an expert in her behalf The physician appeared never to have treated the plaintiff professionally, and made no examination of any kind, except what he spoke of as a "mental examination," consisting of a series of questions concerning the history of her case, and the differences, if any, between her physical and nervous condition before and after her injury This interview was held but one or two days before the trial, and its evident purpose was to qualify the physician to testify as a witness in the plaintiff's behalf Such purpose was entirely legitimate and reflected no discredit on the plaintiff or the witness, and had the latter found such symptoms of such observable abnormal conditions as led him to the conclusion that the plaintiff was afflicted with nervous prostration, then unquestionably his testimony to that effect would be entirely competent But he expressly stated that he made no examination except to get from the plaintiff her version of the history of the case, and on this information, supplemented by other statements from another physician and a named woman, his opinion was formed The witness did not state what facts he ascertained from the plaintiff or from the other physician or from the woman That an opinion so expressed is not competent evidence is the view approved by many authorities It was not necessary in this case to hold, and the court must not be understood as holding, that a physician called to treat a patient may not in making his diagnosis properly consider such patient's statement of her case and her condition together with the statements of other attending physicians concerning the case, or that an opinion based on his own observation and judgment as thus enlightened is not competent evidence in a proper case. On the record here made, the court need go no farther than to hold that, where a party alleged to have been injured calls in an expert for the purpose of enabling him to testify in her behalf, such expert being a stranger who has never treated her professionally and makes no examination of the patient except to question her in regard to her past and present condition, and to obtain the reports or statements made by others concerning such conditions, his opinion, based wholly or in part on such information, is not competent evidence and should be excluded from the jury It should be added that some members of the court are of the opinion that a medical expert may properly testify to his diagnosis based on the history of the case as made to him by the patient, but may not found his opinion on statements to him by third persons However, for the purposes of this case it was not necessary that the court decide on the admissibility in evidence of a diagnosis of the kind first mentioned, because the expert witness admittedly drew his conclusion in part from information derived from persons other than the plaintiff

Liability for Roentgenographic Burn—"Res Ipsa Loquitur" —Care Required

(Holt vs Ten Broeck (Minn), 159 N W R 1073)

The Supreme Court of Minnesota affirms a judgment for $2 500 damages in favor of the plaintiff for injury from a burn alleged to have been caused by the negligence of the defendant in taking a roentgenogram The court says that, in February, 1915, the plaintiff was under treatment for some trouble in her hip supposed to be a fracture or a dislocation Her attending physician desired a roentgenogram The defendant, a regularly licensed physician, took it A few weeks afterward a sore developed on the plaintiff's hip which it was claimed was the result of a roentgenographic burn The evidence was sufficient to sustain a finding that the Roentgen ray caused the sore The testimony of the plaintiff was that there was none before It was at the point of the exposure There was medical testimony having a tendency to prove that it came from a roentgenographic burn The question was for the jury To recover damages it was necessary that the plaintiff prove negligence in the defendant There was little direct evidence of negligence The plaintiff claimed that during the progress of the taking the defendant made some exclamation to the effect that the machine was not working right Her claim was that the exposure was unduly long, but her testimony did not strongly support it A physician sufficiently qualified to give an opinion as an expert stated that a proper application of the rays would not produce the result which he found The evidence was that with a proper machine and with a proper use of it a burn is unusual There was evidence that the machine was a proper one The machine and its operation were wholly under the control of the defendant Under such circumstances the rule of *res ipsa loquitur* (the matter speaks for itself) applies It did not follow from this, as the plaintiff's counsel argued that the burden shifted to the defendant of proving freedom from negligence '*Res ipsa loquitur,* where it applies, does not convert the defendant's general issue into an affirmative defense" The language quoted was approved in a case in which this court held that the *res ipsa loquitur* rule merely permits the jury to draw an inference of negligence, and 'the jury is to consider and weigh the inference in the light of all the facts and circumstances, and give it such weight as tending to prove negligence as they deem it entitled to" It does not follow from what is here said that the *res ipsa loquitur* doctrine applies to a bad result or mishap coming from a physician's treatment The rule does not apply in such cases In determining negligence it can make no difference whether the one operating the roentgenographic appliance is a physician or a lay expert The care required is ordinary care It is the care exercised by and to be expected from one reasonably skilled in the use of the appliance The rays were not applied for curative purposes, but to obtain information This is the logical if not the necessary result of the holding in *Henslin vs Wheaton,* 91 Minn 219 97 N W R 882, that in an action against a physician for negli gence in the use of a roentgenographic machine he was not entitled to have the question of his skill determined by physicians of his own school. A physician who qualified himself as an expert in the application of the Roentgen ray was permitted to give his opinion, based on the result of the operation, that the application was improper. This was not error. The verdict was for $2,500. The defendant claimed that it was excessive. The trial occurred a year after the injury. After the injury developed the plaintiff wandered from doctor to doctor for several months. Finally she went to the hospital. She was there six months. The pain had been considerable. At the time of the trial, so her claim was, she was unable to work. The sore was still open and of considerable extent. One physician said it was uncertain whether it would be permanent. The verdict was not excessive.

Neither Surgeons nor Charitable Hospitals Liable for Negligence of Nurses

(Morrison v. Henke et al. (Wis.), 160 N. W. R. 173)

The Supreme Court of Wisconsin affirms a judgment dismissing this action against two surgeons and a charitable hospital association to recover damages for alleged negligent treatment of the plaintiff following an operation for appendicitis while a patient at the hospital. The court says that the case was tried to a jury, which found (1) that certain sores on the plaintiff's leg were caused by a burn from a hot-water bottle placed in his bed at the hospital; (2) that the nurses placed in charge of the plaintiff were incompetent; (3) that the defendant surgeons were wanting in the exercise of ordinary care in permitting such nurses to attend the plaintiff after the operation; (4) that such want of ordinary care was the proximate cause of the plaintiff's injury; (5) that the nurses who had charge of the plaintiff were wanting in the exercise of ordinary care in their care and attendance on him; (6) that such want of ordinary care was a proximate cause of the plaintiff's injury, and (7) damages in the sum of $700. But having examined the evidence relative to the alleged negligence of the surgeons, the court is satisfied that the finding that they were wanting in the exercise of ordinary care in permitting the nurses to attend the plaintiff after the operation was properly set aside. There was no evidence to show that if the nurses were incompetent—a fact by no means clearly established—the surgeons knew or were chargeable with knowledge of such incompetence. They were not hired by the surgeons but by the hospital, and no fact was shown coming to the knowledge of the surgeons sufficient to put them on inquiry as to the nurses' competency. In the absence of such fact they had a right to assume that the nurses were competent. The action was also properly dismissed as to the defendant hospital association. The evidence showed that it was an eleemosynary institution paying no dividends and was largely supported by charitable donations; that the fees charged from patients able to pay did not support it, and that the weekly charge to the plaintiff was not enough to cover the cost of the services rendered to him. The authorities in this country almost uniformly hold that, in the absence of negligence in their selection, charitable hospitals are not liable to their patients for the torts or wrongful acts of their employees. But while our courts disclose great unanimity in declaring charitable hospitals immune against claims of their patients based on the negligence of their servants, they are by no means agreed as to the grounds of immunity. This court prefers to rest its decision on the principle that since these charitable hospitals perform a quasi or sort of public function in ministering to the poor and sick without any pecuniary profit to themselves, the doctrine of respondeat superior, let the superior or master answer, should not be applied to them in favor of those receiving their charitable services. Since the hospital derives no profit from its work, and since it is founded for the sole purpose of conserving the health and life of all who may need its aid, and since it ministers to those who cannot pay as well as to those who can, thus acting as a good Samaritan, justice and sound public policy alike dictate that it should be exempt from the liability attaching to masters whose only aim is to engage in enterprises of profit or of self-interest. The patient who accepts the services of such an institution, if injured therein by the negligence of an employee, must be content to look for redress to such employee alone. And all the cases holding charitable hospitals immune that have spoken on the subject agree that the exemption from liability applies to pay as well as to free patients.

Death From Eating Poisonous Mushrooms Accounted Accidental

(United States Casualty Company v. Griffis (Ind.), 114 N. E. R. 83)

The Supreme Court of Indiana affirms a judgment for $6,015 in favor of Mrs. Griffis, plaintiff, for the death from eating mushrooms tainted with ptomain poison, of her husband, who was insured under an accident policy by the defendant company "against loss resulting directly and independently of any and all other causes from bodily injury effected solely through external, violent and accidental means," though the policy expressly exempted the company from liability for injury "resulting from or contributed to, directly or indirectly, wholly or partially, by disease." The court says that it quite agrees with the contention that the means must be accidental, and that a mere accidental result would not suffice under the language of this policy; but the court is of the opinion that the unintentional taking of the poisonous substance contained in what the insured supposed to be edible mushrooms constituted an accidental means which caused the death. The court is also of the opinion that, under the facts disclosed here, the ptomain poison did not constitute a disease within the meaning of the language of the policy exempting the company from liability for injuries caused by disease.

Society Proceedings

COMING MEETINGS

Idaho State Medical Association, Sandpoint, June 25-26.
Montana Medical Association, Kalispell, July 11-12.
Oregon State Medical Association, Portland, June 28-30.
Western Roentgen Society, Kansas City, Mo., July 20-21.

ASSOCIATION OF AMERICAN PHYSICIANS

Meeting held in Atlantic City, May 2-3, 1917

(Continued from page 1872)

Calcium and Magnesium in the Blood in Rickets and Tetany

Drs. John Howland and William McKim Marriott, Baltimore: In both classes of cases there is a tendency toward a low calcium content, lower in the severe cases than in the mild, the lowest being 7.5 mg., the normal is about 10 mg. There is a diminution of the calcium content in rickets. The relationship between tetany and rickets is close. In fourteen out of fifteen cases of tetany there were repeated convulsions, and when the convulsions occurred there were 6 mg. of calcium in the serum. It would seem, therefore, that calcium is therapeutically indicated in tetany, but it cannot be stated whether or not it is of real value. However, in six cases in which it was used it seemed to be of great value, no child had convulsions after its use.

DISCUSSION

Dr. Samuel J. Meltzer, New York: It has been shown that in animals a reduction of calcium can be brought about by the use of oxalates; if magnesium is added, the animal becomes completely paralyzed. When calcium is given, the animal awakens quickly.

Case of "Wilson's Disease" with Postmortem Findings

Drs. C. P. Howard and C. E. Royce, Iowa City, Iowa: This patient denied that he used alcohol, and said that he had never had any infectious disease, but that he was liable to attacks of diarrhea. In 1916 he complained of pain in his legs and some difficulty in walking He had edema of the legs For three or four weeks this symptom persisted Four weeks after the onset, he had cramps in the legs, hands and feet, especially in the toes of the right foot He became more ataxic and quite emotional The fingers were flexed on the hands, the wrist flexed on the forearm, and the arms extended and held closely to the side The thighs were flexed on the abdomen, the feet were extended, and the toes were flexed There was no mechanical or electrical irritability at this or at subsequent examinations The skin was harsh and dry The hair was scanty The abdomen was tympanitic The urine and blood were normal Careful and repeated examinations of the central nervous system revealed nothing unusual in the motor or sensory tracts The spinal fluid was examined, no cells were found, and the Noguchi and Wassermann tests were negative The calcium content was unusually high, being 13 mg per hundred c c There was no dysphasia nor dysarthria No organism could be found in the blood The patient died apparently of a terminal infection, basal in character When the abdomen was opened the liver was found to be nodular, studded with large white nodules, suggestive of adenocarcinoma or a tumor similar in nature The case was similar to those described by Wilson in 1912 Since then there have been nine such cases reported in this country The symptoms of a condition called pseudocirrhosis are identical with Wilson's syndrome The pigment has been tested for silver and manganese, but no one has been able to determine the cause of the discoloration of the skin

DISCUSSION

Dr J Ramsey Hunt, New York I have some lesions in mind that are circumscribed and confined to the caudate the lenticular nucleus and to the corpus striatum The tremor resembles that of paralysis agitans, but there is also a tendency to clonic spasm and choreiform movements Wilson emphasized the importance of this tremor One week ago, in a study of juvenile paralysis agitans, I found that the lesion was situated in the corpora striata and limited to the larger motor cells Paralysis agitans is a type of disease due to atrophic disturbances in the large motor cells, Huntington's chorea is a type of destruction of the smaller cells The massive lesion in Wilson's disease is a combination of the destruction of the two systems

Dr C E Royce, Iowa City, Iowa The hilum at the base of the brain was not at all pathognomonic of Wilson's disease So far as I know there has been no patient with pseudocirrhosis or Wilson's disease ever exposed to manganese There are some evidences of a syndrome in which the manganese marked a somewhat similar type as the disease under consideration

Use of Foreign Proteins

Dr J L Miller, Chicago The foreign proteins were given intravenously, except milk, which was given intramuscularly In addition to the protein, we used collargol in the cases of iritis During March and April we discharged fourteen patients who had had acute arthritis, the patients received one injection each day until three had been given There was only one recurrence We used typhoid vaccines No beneficial results were obtained from the use of gonorrheal vaccines In the subacute or chronic cases the results were less marked than in the acute cases In eight or nine cases of pneumonia in which these injections were given, the reactions were quite violent In a series of 200 cases in which over 500 injections were given, there has been no fatality We have had more remarkable results with this treatment than with any other

DISCUSSION

Dr E E Irons, Chicago In a discussion of the effects of foreign protein in disease, interest centers on two main topics (1) the relation of the phenomena observed to those which occur in the natural recovery from disease, and (2) the clinical results which follow the use of foreign protein in disease

1 While the reactions which we speak of as specific differ from those called nonspecific, we may conceive of both classes as dependent on physicochemical principles, differing only in the degree of the fineness of their adjustment The findings of Hektoen indicate that in carefully controlled animals the introduction of one antigenic substance may cause the appearance not only of antibodies specific to the recently injected antigen, but also antibodies specific to another different antigen, in an animal previously sensitized to the latter antigen The recognition of this interrelation of specific and nonspecific reactions is an important step in understanding the problems of the effects of foreign protein in infections, and of the effect of one infection on another in the human body

2 To what extent do the results of our observations warrant the use of intravenous injections of foreign protein in infections, especially typhoid fever and arthritis? Published reports have led to a widespread employment of this procedure, especially in arthritis, often by those untrained and uncritical in judgment In typhoid fever a number of favorable reports have appeared On the basis of our observation and those of others, we have not felt justified in extending the use of this procedure in typhoid fever In patients suffering from arthritis, striking amelioration of pain and swelling in the joints has followed the intravenous injection of bacterial and other foreign protein There is always the danger that the routine use of a nonspecific remedv may lead to an incomplete and careless study of the patient We must also take into consideration the other effects of the injection on the patient There have been three deaths in one hospital within six months following the intravenous injection of bacterial protein From the therapeutic point of view I believe we should warn against the indiscriminate use of these methods until they have been studied more thoroughly, and the dangers as well as the reputed advantages better defined

Dr. S Solis Cohen, Philadelphia I have used colloidal silver and gold and obtained satisfactory results in cases of profound sepsis and in toxemias of various origin, especiallv in streptococcus infections In regard to the treatment of arthritis by intravenous injections, I should like to refer to the use of liquor formaldehydi, after the use of this agent there has been in almost every instance an immediate disappearance of pain When the patient recovered, the recovery was prompt and continuous, and there were no relapses or violent reactions

Dr Milton H Fussell, Philadelphia I know of at least two deaths that have occurred in cases of typhoid fever treated in this way

Dr J L Miller, Chicago We refuse to give the injections to patients when we think they cannot stand them We first test the patient out with very small doses I believe, however that with proper precautions we are secure against bad results, but we should be careful in the selection of cases

Renal Function in Acute Infections

Dr Channing Frothingham, Jr., Boston During the course of acute infections there is no serious injury to the kidneys, and it is better to use a high caloric diet.

DISCUSSION

Dr Theodore C Janeway, Baltimore It is interesting to note the high index of urea in febrile and other acute diseases I recall an instance of hyperthyroidism which showed quite regularly an extremely marked increase in the output of urea

A Case of Primary Thrombophlebitis of the Hepatic Vein and a Case of Primary Sarcoma of the Epicardium

Dr Nathan E Brill, New York A woman was carried into the ward, December 4, moaning with pain She stated that she had never been sick before She was 24 years of age, married four months, and pregnant two She had been suffering for four or five days with pain in the epigastrium and down the lateral aspects of the abdomen. The liver was enlarged 2 cm below the free border of the ribs The pain was intense, and the woman was unable to lie down The blood count showed 21 000 white cells with 80 per cen polymorphonuclears On the following day the liver was found to be 4 cm below the free border of the ribs On the next day the liver was still larger, being 7 cm below the free border of the ribs, and for the first time the spleen was felt On the day following the spleen was found to be 3 finger-breadths below the free border of the ribs and the liver was at the crest of the ilium The abdomen was enormously distended An exploratory operation was finally decided on About a liter of clear fluid was evacuated and the uterus was also evacuated The liver was found to be down to the iliac crest The spleen was 4 cm below the free border of the ribs The patient lived for three weeks after this time The necropsy showed a liver considerably shrunken in size and a similar condition of the spleen The abdominal viscera showed no infectious process At the entrance of the hepatic vein into the vena cava for a distance of 0 5 cm was a blood clot This was traced along the hepatic vein and showed soft clots connected with the periphery by a little tissue The clot extended all over the branches of the hepatic vein There was a primary thrombosis in the hepatic vein terminating at the vena cava Only three cases of this kind have been reported. The woman died because of complete suppression of hepatic function

The second case primary sarcoma of the pericardium occurred in a woman aged 22, who came into the hospital in June with a frank attack of lobar pneumonia There was an associated endocarditis with effusion The patient left the hospital in July and returned in September, when a diagnosis of pericardial effusion was made On the second day after admission the pericardial sac was tapped and a small amount of blood stained fluid obtained This patient developed an adherent pericardium dilatation of the heart and a large amount of effusion in the left sac. She lived until about the middle of January At the necropsy when the sternum was removed the pericardial sac was found to be 20 by 24 by 14 cm When the pericardium was incised a large tumor mass was found and a small amount of brown colored fluid The mass enveloped the entire heart but the entrance of the veins was not occluded at all On section the tumor showed a large number of spindle and round cells The pathologist s report stated that the tumor was a sarcoma of the epicardium There were no metastases Only eight cases of sarcoma of the epicardium have been reported in the literature

Localization of Syphilis on the Aorta

Dr Oscar Klotz Pittsburgh In the majority of instances in which infection localizes on the tissues of the aorta, it is found to begin in the outermost layers and from here to attack the adventitia and media The localization has been ascribed to distribution by the vasa vasorum On the basis of the hematogenous distribution it is not possible to account for the more frequent localization of infection on the ascending and transverse portions of the aorta A study of the aorta and its lymphatic distribution demonstrated a greater number of lymph channels in given regions This is particularly true for the first portion of the aorta The prominence of these lymphatics and evidence as serving for routes of infection was seen in several cases of pneumonia A similar correlation of the lymphatic system to the distribution of the infectious agent was seen in syphilis The lymphatics in the aorta will follow the course of the vasa vasorum thus giving rise to a perivascular infiltration which is so prominent in syphilitic aortitis The lymphatics appear to be more important structures than the small nutrient vessels for the distribution and localization of syphilis

Pneumonia in Relation to Types of Pneumococcus and the Serum Treatment of Type 1 Cases

Drs Henry A Christian and H L Alexander, Boston This study includes 187 cases of typical bronchopneumonia, eleven of which were treated by means of serum As a rule, there was a critical fall of the temperature within a few hours after the serum was given frequently more than one dose was needed to reduce the temperature Sometimes there was rise in temperature and a chill following the first dose Serum sickness occurred in most cases one week after the treatment, but was never severe There was no distrubance as a result of the serum treatment during convalescence beyond some itching and urticarial lesions Of the treated patients one died during the pneumonia, one died during convalescence, and two developed empyema There was a reduction in the mortality from 42 per cent in the untreated cases to 18 per cent in the treated cases

DISCUSSION

Dr Theodore C Janeway, Baltimore I have made a comparison of the results in the white and colored races Altogether there were of the white race twelve cases with seven deaths of the colored race forty-six cases with eleven deaths This shows a definitely lower mortality among the negroes The reactions seem to have a definite relation to the amount of serum administered

Dr M H Fussell, Philadelphia Seven patients have been treated in my ward with no deaths One patient had a very severe reaction after being given 60 c c of the serum, but recovered

A Case of Ventricular Fibrillation with Recovery

Dr George Canby Robinson New York It has been generally accepted that when the human ventricles pass into a state of fibrillation death is an almost immediate and an invariable consequence In the case reported three attacks of syncope occurred These lasted about four minutes each During one of these attacks when the patient ceased to breathe and when no heart sounds were audible, an electrocardiogram characteristic of ventricular fibrillation was obtained The patient lived thirty hours after this attack, during which time numerous electrocardiograms were obtained The case is the first example of recovery from a well established ventricular fibrillation that has been observed

Atrophy of the Large Motor Cells of the Corpus Striatum in the Presenile Type of Paralysis Agitans

Dr. J Ramsey Hunt, New York The clinical types of paralysis agitans are the presenile and senile types and a rare juvenile form, also a paralysis agitans without tremor, and a rare tremor type of the disease in which rigidity is absent In addition various irregular and symptomatic forms are recognized In the juvenile type there are certain pathologic changes consisting of atrophy and diminution in the number of the motor cells of the corpus striatum The suggestion is made that paralysis agitans beginning in early life belongs to the group of motor system diseases and is dependent on a primary atrophy of the efferent projection system of the corpus striatum The atrophic changes are limited to the motor cells of the globus pallidus, and is especially marked in the large cells of similar type in the caudate nucleus and putamen The cells of the globus pallidus type, therefore represent a well defined cellular system the globus pallidus mechanism which in my opinion is the essential motor system of the corpus striatum According to this conception paralysis agitans is a primary systemic disease, occurring in the course of the striospinal mechanism, while spastic paralysis (primary lateral sclerosis) is a systemic disease of the corticospinal mechanism The smaller ganglion cells of the caudate nucleus and putamen are not affected The motor cells of the globus pallidus proper show only slight alterations Some of these cells appeared slightly reduced in size and presented a somewhat rounded or angular appearance but these changes are not well defined and the essential lesion is atrophy of the giant motor cells of the caudate and putamen According to this conception, the corpus striatum is a motor mechanism for the control of automatic and associated movements operating through the extrapyramidal motor tracts The pallidal system is the motor system proper and terminates in relation to important ganglions in the hypothalmic region, and through these exerts a controlling influence by way of the extrapyramidal system on automatic and associated movements The peculiar rigidity of paralysis agitans is dependent on a hypertonicity of the musculature which most authorities agree is of central origin

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Obstetrics and Diseases of Women and Children, York, Pa

June, LXXV, No 6

1 Metabolism of Mother and Offspring Before and After Parturition J R Murlin, New York —p 913
2 Antenatal Pathology E A Schumann, Philadelphia —p 953
3 *Hydatidiform Mole, Analysis of Five Hundred Cases P Findley, Omaha —p 968
4 Treatment of Septic Incomplete Abortion H N Vineberg and S Wiener, New York —p 975
5 Nitrous Oxid Gas as Analgesic in One Hundred and Thirty Five Cases of Labor G H Ryder, New York —p 981
6 *Case of Puerperal Gangrene of Leg W H W Knipe, New York —p 988
7 Report of Very Large Fetus (15 11/16 Pounds) G L Brodhead, New York —p 993
8 Hyperplasia of Endometrium E Novak, Baltimore —p 996
9 Resident Physician in His Relation to Operative Gynecology J M Fisher, Philadelphia —p 1001

3 **Hydatidiform Mole**—An analysis made by Findley of 500 reported cases shows that there is nothing significant in age, the condition having occurred at all ages from 13 to 55 In the 500 cases there were twin pregnancies in five, repeated molar pregnancies in seven, normal pregnancies following moles in twenty-five, partial moles with fetus in three, partial mole with living normal child in three. Repeated molar pregnancy has occurred from two to eighteen times The birth of one or more moles does not preclude subsequent normal pregnancies The birth of moles occurs with about equal frequency in the second and third trimesters of pregnancy and has been known to occur as late as the seventeenth month of gestation Chorio-epithelioma malignum developed in 157 cases, or 31 4 per cent of the 500 cases of mole formation Of the 265 benign moles there were recoveries in 237 and deaths in twenty-eight, a mortality of 10 5 per cent, while of ninety-nine moles, which later became malignant, there were forty-five recoveries and fifty-four deaths, a mortality of 54 5 per cent The following symptoms are tabulated Bleeding in 290 (66 per cent), pain in 42 (9 5 per cent), albuminuria in 13 (38 per cent), vomiting in 60 (13 5 per cent), fever not given, dyspnea in 5, hemoptysis in 3, toxemia in 1, headache in 5, eclampsia in 9 Among the malignant cases there were vaginal metastases in 25 pulmonary metastases in 21, cerebral metastases in 4 In 386 cases there was spontaneous delivery in 167 (43 2 per cent) and operative delivery in 219

6 **Puerperal Gangrene of Leg**—This was a case of gangrene of the right foot and leg following a septic abortion due to a mixed infection of *B aerogenes-capsulatus,* streptococcus and a diplococcus, starting as a thrombophlebitis of the right broad ligament and involving the inferior vena cava, both common iliac veins, both external iliac veins and the femoral vein on the right side while the arteries are in no way involved Associated with this condition was a pyemia, bronchopneumonia, abscess of the lung and general peritonitis Death terminated the case

Boston Medical and Surgical Journal

May 31 CLXXVI No 22

10 Drug Users in Court V V Anderson, Boston —p 755
11 Shiftling Charlatan and Vagabond Who They Are and How They Arise J V Haberman, New York —p 757
12 End Results of Treatment of Fracture of Elbow H Neuhof and H F Wolf, New York —p 759
13 Mucosa of Rectum and Sigmoid Colon as Focus of Infection H W Soper, St Louis —p 766
14 Case of Melanotic Sarcoma Arising in Eye, with Metastases L Adams Bangor, Me —p 768
15 Case of Systemic Oidiomycosis with Manifestations in Central Nervous System F J Farnell and S Starr, Providence, R I —p 771
16 Comparative Statistics on Physical Examinations of Pupils of Boston Public Schools from Dec 1, 1915, to April 1, 1917 W H Devine, Boston —p 773
17 Radium in Treatment of Cutaneous Epithelioma and Keratosis Senilis F S Burns and J H Blaisdell, Boston —p 774

June 7 No 23

18 Three Types of Tuberculosis M E Lapham, Highlands, N C —p 795
19 Defectives in Our Prisons A W Stearns, Boston —p 801
20 Treatment of Some of Postural Defects and Habit Motions Common Among Blind L D Swinerton, Watertown —p 803
21 Case of Iritis and Optic Neuritis Following Tonsillitis I Sobotky Boston —p 806
22 *Nature's Drainage of Pelvic Abscess Evolution of Adventitious Drainage Tube H Packard, Boston —p 807
23 Case of Tubal Pregnancy E H Mackay, Clinton —p 808
24 Case of Amebic Abscess of Liver in Guardsman Recently Returned from Mexican Border L Adams, Bangor —p 808

22 **Nature's Drainage of Pelvic Abscess**—A patient recently operated on by Packard for the radical cure of chronic pelvic abscess presented a surprising and wholly unique mechanism for drainage Briefly, a distinct and perfectly formed tube standing out clearly, and practically free from adhesion with any of the adjacent viscera, extended from the depths of the pelvis up along the left side to an opening in the abdominal wall, a little to the left of the median line and about 2 inches below the umbilicus It had a slight mesenteric like attachment to the pelvic parietes, easily separated by finger dissection and snipping scissors, and was covered with a smooth peritoneum like covering

Bulletin of Johns Hopkins Hospital, Baltimore

June XXVIII, No 316

25 *The D N Ratio in Diabetes Mellitus H O Mosenthal and D S Lewis Baltimore —p 187
26 Nature of Resistance to Tuberculosis A K Krause, Baltimore —p 191
27 *Amino Acid Nitrogen of Blood in Normal and Complicated Pregnancy and in New Born Infant. A Morse, New Haven, Conn —p 199
28 Etymology, Popular and Scientific, of Terms for Kidney, in Various Languages D I Macht, Baltimore —p 204

25 **D N Ratio in Diabetes Mellitus.**—The data of a case of diabetes mellitus demonstrating a maximal dextrose-nitrogen ratio of 3 65 1 are presented by Mosenthal and Lewis They state that among the principal causes for apparently spontaneous changes in the D N ratios present in some cases of diabetes mellitus are (1) the inconstant renal threshold to the blood sugar, and (2) the variable heights to which the blood sugar rises after meals, even though these are not appreciably modified from day to day

27 **Amino-Acid Nitrogen of Blood in Pregnancy and in New-Born Infant**—In normal women examined by Morse the amino-acid nitrogen varied between 8 and 14 mg per 100 c.c of blood, and the same range of variations was encountered during pregnancy In other words, the requirements of the fetus cause no increase of the substances in the maternal blood out of which protein is constructed Generally, normal values were found in preeclamptic toxemia and eclampsia, though exceptionally an increase in the amino-acids occurred during convalescence Nephritic toxemia was accompanied by a normal quantity of amino-acid nitrogen in the blood An excessive quantity of amino-acids occurred in cases of obscure toxemia, possibly related to acute yellow atrophy of the liver During labor normal values were found at its conclusion the extremes encountered were 8 1 and 13 9 mg In fetal blood the amino-acid nitrogen varied between 10 and 15 8 mg per 100 c c of blood The passage of amino acids from mother to fetus requires the assumption of "absorption" properties on the part of the placenta, for though the difference between the concentration of amino-acids in the two circulations is small, it is in favor of the fetus in 70 per cent of the cases, and the higher level in that organism prevents the acceptance of simple diffusion as the explanation for the placental exchange Morse believes that the "absorption" property of the placenta probably protects the fetus against loss of material intended for the construction of protein

Georgia Medical Association Journal, Augusta

May VII No 1

29 Vital Statistics E R Park LaGrange —p 1
30 Public Health Work in First Sanitary District and Some Pathologic Conditions among Children C C Whittle, Tifton —p 4
31 Education Cornerstone of Sanitation V M McCord, Rome —p 7

32 Laboratory as Aid to Public Health Work L. T Fatillo Atlanta —p [illegible]
33 What Local Health Officer Should Know About Water Supply R C Werner Atlanta —p 11

Iowa State Medical Society Journal, Des Moines

May VII No 5

34 Remote and Systemic Effects of Focal Infections. E T Edgerly Ottumwa —p 165
35 Sacro Iliac Articulation J N Warren Sioux City —p 168
36 Id H J Prentiss Iowa City —p 172
37 Syphilis of Central Nervous System J I Auner Des Moines —p 174
38 Amyotrophic Lateral Sclerosis T B Throckmorton Des Moines —p 177
39 Reed's Bacillus Epilepticus. J B Rogers Independence —p [illegible]
40 Standardization Preparation of Patient Operation and Postoperative Treatment for Lessening Sepsis and Shock in Tonsillectomy H C Langworthy Dubuque.—p 181
41 Acute Abdominal Crisis. K L. Johnson and E. D McClean Oskaloosa —p 184

Journal of Experimental Medicine, Baltimore

Jun XXV No 6

42 Immunologic Studies on Pure Cultures of Various Spirochetes H Noguchi and S Akatsu New York —p 765
43 Bacteriology of Acute Anterior Poliomyelitis J A Kolmer C P Brown and A M Freese Philadelphia —p 789
44 *Henle's Reaction of Chromaffin Cells in Suprarenals and Microscopic Test for Epinephrin. T Ogata and A Ogata, Tokyo Japan —p 807
45 *Studies on Bacillus Welchii with Special Reference to Gas Gangrene J P Simonds Belgium —p 81[illegible]
46 Equilibria in Precipitin Reactions Coexistence of Single Free Antigen and Its Antibody in Same Serum. S Bayne Jones New York.—p 837
47 *Focal Pulmonary Tuberculosis of Children and Adults E. L Opie St. Louis —p 855
48 Classification of Nonhemolytic Streptococci R. A Kinsella and H F Swift New York.—p 877

43 Bacteriology of Poliomyelitis.—Four different varieties of easily cultivated micro organisms have been cultured by the authors from the cerebrospinal fluid and tissues of cases of acute anterior poliomyelitis namely a streptococcus a diplococcus diphtheroids and gram negative bacilli It is not contended that they were all inherent in the tissues The streptococci grew both aerobically and anaerobically, under anaerobic conditions growth was slow They were not found in the anaerobic cultures of 106 cerebrospinal fluids, they were *found in one of twenty anaerobic* blood cultures and frequently in the cerebrum cerebellum pons and medulla cord tonsils lungs liver kidneys spleen pancreas, thymus gland *suprarenal glands and mesenteric glands of* fatal cases The diplococci are gram positive and transplanted to solid media yield luxuriant growths and a staphylococcus grouping They grew aerobically and anaerobically, but more slowly under the latter condition, and the cocci became smaller and more rounded Diplococci were found in the anaerobic cultures of forty-eight of 106 cerebrospinal fluids, also in the cerebrum cerebellum pons and medulla, cord *tonsils, lungs liver kidneys* spleen pancreas and mesenteric glands of fatal cases The filtrates of emulsions of tissues containing streptococci and diplococci passed through fine Kitasato *and* Pasteur-Chamberland filters were sterile unless large amounts of filtrates were collected Intracranial intravenous and intraperitoneal injection of these easily cultivated streptococci *diplococci diphtheroids and gram-negative* bacilli failed to produce paralysis in rabbits or monkeys With two exceptions all the cultures were transplants from the original anaerobic ascites-broth-kidney cultures of cerebrospinal fluid and various tissues Arthritis and meningitis were produced by *the streptococci* but there were neither clinical nor histologic evidences of true poliomyelitis

44 Henle's Reaction of Suprarenal Chromaffin Cells—The Ogatas believe *that they have* established the fact that the chrome reaction as well as the silver and osmium reactions are merely reductions by epinephrin In their opinion the naming of the cells giving a *positive reaction* should not be based on the reaction (that is chromaffin cells), but on the presence of epinephrin itself Biedl's terms suprarenal cell, suprarenal organ suprarenal body suprarenal *system* and also Bonnamour's term epinephrin producing cells, are *appropriate in this respect* The authors propose the names *epinephrin cell, epinephrin tissue epinephrin system*, thereby indicating the presence of epinephrin

45 Bacillus Welchii and Gas Gangrene—Spores of the *Bacillus welchii* group of bacteria were found on 100 per cent of the uniforms of Belgian soldiers who had come directly from the trenches, and in the meshes of all the samples examined of the new cloth from which the uniforms were made In fifteen out of twenty fresh war wounds, members of this group of bacteria were found Of the fifteen patients only three later developed *gas gangrene* Once the spores of *bacillus welchii* have been carried into a wound the deep lying lacerated muscle tissue appears to be the most important factor in the onset of gas gangrene *Bacillus welchii* is able to grow and produce gas in broth containing up to 40 per cent saccharose, some strains in 50 per cent, but none of those examined were able to grow when the concentration of the sugar reached 60 per cent

47 Focal Pulmonary Tuberculosis—Evidence of tuberculous infection was found by Opie in the lungs of fifty adults He says *that* approximately one half *of* all adults have encapsulated lesions of the lungs or bronchial lymphatic nodes whereas in one third pulmonary and lymphatic lesions are firmly calcified and completely healed Tuberculous pulmonary lesions of adults who have died of diseases other than tuberculosis are of two types (1) apical tuberculosis similar to the usual type of fatal phthisis and unaccompanied by caseation of the regional lymphatic nodes (2) focal tuberculosis not more commonly situated in the apices of the *lungs* than elsewhere and accompanied by caseation (or calcification) of the adjacent lymphatic nodes Focal pulmonary tuberculosis of adults is identical with the tuberculosis of childhood It occurs in at least 92 per cent of all adults It may be acquired between the ages of 2 and 10 years but in more than half of all individuals (in this city) makes its appearance between the ages of 10 and 18 years Tuberculosis of children does not select the apices of the lungs is accompanied by massive tuberculosis of regional lymphatic nodes and exhibits the characters of tuberculosis in a freshly infected animal, whereas tuberculosis which occurs in the pulmonary apices of adults has the characters of a second infection Almost all human beings are spontaneously vaccinated' with tuberculosis before they reach adult life

Journal of Infectious Diseases, Chicago

Jun XX No 6

49 Anaphylatoxin and Anaphylaxis Peptone Anaphylatoxin F G Novy P H DeKruif and F O Novy Ann Arbor Mich —p 657
50 Primary Toxicity of Normal Serum P H DeKruif Ann Arbor Mich —p 717
51 Specific Anaphylactic Shock F G Novy and P H DeKruif Ann Arbor Mich —p 776
52 Anaphylatoxin and Amino Nitrogen P H DeKruif and W M German Ann Arbor Mich —p 833

Journal of Medical Research, Boston

May XXXVI No 2

53 *Arthritis Deformans as Infectious Disease P W Nathan New York —p 187
54 *Formation of Giant Cells in Tuberculosis. J H Warren Cleveland —p 225
55 *Sensitization of Patients *with Bronchial Asthma to Proteins in* Animal Fruit and Vegetable Foods I C Walker, Boston —p 231
56 *Sensitization of Patients with Bronchial Asthma to Various Pollens I C Walker Boston —p 237
57 *Complement Fixation and Precipitin Reactions with Serum of Bronchial Asthmatics Who Are Sensitive *to Proteins of Wheat* Horse Dandruff Cat Hair and Bacteria I C Walker Boston —p 243
58 Progressive Muscular Ossification (Progressive Ossifying Myositis, —Progressive *Anomaly of Osteogenesis E L Opie St Louis* —p 267
59 Hypertrophic Chondrodystrophy *in Infancy* and Adolescence—Progressive Anomaly of Osteogenesis E L Opie and N Allison St Louis —p 277
60 *Part Staphylococcus Pyogenes Aureus and Albus May Play in Cause of Bronchial Asthma I C Walker and J Adkinson Boston —p 295
61 Neuroblastoma Report of Case E P Lehman St. Louis —p 309

53 Arthritis Deformans as Infectious Disease—*Evidence* is submitted by Nathan to prove that all the various forms of polyarthritis may be caused by infections The pathologic lesions correspond exactly with those of known infections and the clinical phenomena can all be ascribed to differences in the location and virulence of the bacteria, the mechanical conditions and the presence or absence of central or peripheral nerve involvement In at least the majority of cases the cause of the chronic, nonsuppurative joint diseases is an infection The presence or absence of symptoms of general infection, the metastases in other organs besides the joints, the recurrences and the location of the primary focus must be considered as a problem separate from the articular disease Though it is not unlikely that a focus in a tooth is sometimes, and one in the throat is often, the point of entry for bacteria, it should be remembered that once the microorganism has entered the blood its connection with the portal of entry ceases For this reason, though the removal of the affected teeth or tonsils will, if these are really the site of the original focus (which is not by any means always certain even when they are abnormal) prevent reinfection or recurrences, such procedures have absolutely no influence on the joint condition as it already exists Moreover, it must be remembered that a focus in the joint structures, like a focus anywhere else, besides causing local changes, may be and no doubt often is a source of general infection and metastases

54 **Formation of Giant Cells in Tuberculosis**—Warren's findings confirm those of other workers, viz, that the so-called epithelioid and endothelioid cells are really of reticular tissue origin and also that the giant cells in tuberculosis are a result of the fusion of these cells Since reticular tissue is found throughout the body, it would seem entirely possible that the cellular reaction in tuberculosis is entirely local, and due to a stimulation of these reticular cells

55 **Sensitization of Asthma Patients**—In one series of patients with bronchial asthma studied by Walker only an occasional case was found to be sensitized to the proteins derived from the staple foods of animal, fruit and vegetable kingdoms

56 **Sensitization of Patients with Asthma to Various Pollens**—In determining the cause of seasonal asthma, Walker advises that the patient be tested with the pollen of all of the common plants rather than with one plant from each family, the whole pollen should be used in these tests rather than a dilution of the pollen Occasionally it is advisable to test with the leaves of trees and other plants since patients may give a positive reaction with the leaves and not with the pollen of that same plant

57 **Complement Fixation and Precipitin Reactions in Asthma**—In this study of bronchial asthma by Walker complement fixation and precipitin reactions, using the protein to which the patient is sensitive as an antigen, have been of no value in diagnosis, prognosis or treatment The cutaneous reaction, however, has proved to be of great value in prognosis and treatment and it seems the only practical and safe method at the present time for the diagnosis of the cause of bronchial asthma

60 **Rôle of Staphylococcus in Bronchial Asthma**—In the experience of Walker and Adkinson the cutaneous reaction has proved to be the safest and best test for determining the bacterial cause of bronchial asthma When cutaneous reactions have failed, serum agglutination tests have been of value in a few cases in determining *S pyogenes-aureus* as the cause of bronchial asthma This test is of no value with *S pyogenes-albus,* since no serum agglutinated this organism There is no fixed relationship between the cutaneous reaction, serum agglutination tests and the isolation of *S pyogenes-aureus* and albus from the sputum and nasal secretions of patients with bronchial asthma Vaccine treatments with *S pyogenes-aureus* and albus do not increase the titer of a serum which agglutinates these organisms, in fact, agglutination tests become negative during treatment with vaccines from them

Journal of Pharmacology and Experimental Therapeutics, Baltimore

May, IX, No 8

62 *Pharmacology of Ureter Action of Nitrates and Nitrites. D I Macht, Baltimore—p 427
63 Action of Epinephrin and Ergotoxin on Single, Physiologically Isolated Cells R A Spaeth and H G Barbour, New Haven, Conn—p 431
64 *Effect of Alcohol on Respiration and Gaseous Metabolism in Man H L Higgins, Boston—p 441
65 *Comparative Effects of Opium Alkaloids Individually and in Combination with Each Other on Gallbladder D I Macht, Baltimore—p 473
66 Vascular Reactions in Experimental Acute Tartrate Nephritis. H T Karsner, Cleveland—p 483

62 **Action of Nitrates and Nitrites on Ureter**—Experiments made by Macht show that the effects of the nitrate and the nitrite ions on the ureter are very different The nitrate effect is slightly stimulating and is not toxic, the nitrite effect, on the other hand, is rapidly toxic and paralyzes the ureteral preparations without completely relaxing them The ureter is killed and remains in a moderately contracted condition Such an effect is obviously not a desirable one, and if the same conditions hold good clinically the value of nitrites in counteracting ureteral spasms is nil A search through clinical literature by the author has failed to reveal any cases of renal colic successfully treated by the use of nitrites

64 **Effect of Alcohol on Respiration.**—Experiments were made by Higgins on men, reclining and breakfastless, as to the effect of 30 and 45 c c of ethyl alcohol (suitably diluted but not as alcoholic beverages) on the respiration and the gaseous metabolism Alcohol sometimes acted to increase the sensitivity of the respiratory center, as shown by a drop in the alveolar carbon dioxid tension, sometimes alcohol was without action on the respiratory center Alcohol did not have any bronchoconstrictor action and seldom any bronchodilator action, as shown from determination of the dead space of breathing The respiration rate was not appreciably affected by alcohol nor was the type of respiration changed, unless there was restlessness The heat production, as indicated by the oxygen consumption, was ordinarily unchanged by alcohol, in about one fifth of the experiments there was a rise in heat production of from 5 to 7 per cent There are indications in about 45 per cent of Higgins' experiments of a relative acceleration in the pulse rate after taking alcohol as compared to taking the control solution In 55 per cent of the experiments this relative acceleration did not occur Study of respiratory quotients obtained indicate (1) that 45 c c of alcohol is not burned at a faster rate than 30 c.c, (2) that probably 20 to 40 per cent of the total metabolism is due to alcohol, and (3) that if the rate of combustion continues at the same rate as in the first two or three hours, it requires eight hours before all of the 30 c c alcohol and twelve hours before all of the 45 c c alcohol is completely burned Alcohol diminished the volume of air breathed per minute in a majority of the cases, this was due to diminished carbon dioxid production

65 **Effects of Opium Alkaloids on Gallbladder**—Macht summarizes his findings as follows Morphin, codein and thebain have either no appreciable effect on the tonus and contractions of the gallbladder, or tend to stimulate them Papaverin, narcotin and narcein tend to inhibit the contractions of the gallbladder and to decrease its tonus In a combination of total opium alkaloids the benzylisoquinolin effect on the smooth muscle predominates Atropin, in small or therapeutic doses, does not relax the tonus of the gallbladder These observations having been made, on the one hand, on the isolated gallbladder, and on the other, having been corroborated on the gallbladder in situ, seem to point to the superiority of papaverin or a combination of total opium alkaloids over morphin in the treatment of biliary spasm or colic.

Medical Record, New York

June 2 XCI, No 22

67 Diagnostic and Prognostic Significance of Spinal Fluid Findings in Syphilis J A Fordyce, New York—p 927
68 Place of Radium in Treatment of Cancer R Abbe, New York—p 931
69 Therapy of Pellagra G M Niles, Atlanta, Ga—p 932
70 Physician According to Francois Rabelais D W Montgomery, San Francisco—p 936
71 Practical Consideration and Treatment of Poor Man's Acute Gonorrhea W R Jones, Seattle—p 939

72 Dementia Praecox J R Ernst, Peoria Ill—p 942
73 Chronic Dacryocystitis and Its Treatment E A Pond Brooklyn—p 944

Michigan State Medical Society Journal, Grand Rapids

June XVI No 6

74 Circumscribed Cystic Meningitis Report of Three Cases H N Torrey and L A Fleming Detroit—p 259
75 *Incidence of Goiter Among Four Hundred and Twenty Five Women at Newberry State Hospital M P Kemp, Newberry—p 262
76 Epididymotomy H W Plaggemeyer, Detroit—p 266
77 Use of Sulphids in Treatment of Mercury Poisoning M L Holm Lansing—p 270
78 Gastric Ulcer Associated with Gastric Crises of Tabes Dorsalis C W Hitchcock Detroit—p 271
79 Two Patients Showing Abnormalities of Conduct Associated with Psychoneurotic Disorders A M Barrett Ann Arbor—p 273
80 Case of Sarcoma of Spinal Cord C L Washburne Ann Arbor—p 276
81 Difficulty of Demonstrating Spirochetes in Syphilitic Placentae R A Bartholomew Ann Arbor—p 279
82 Cataract Deliriums Report of Cases Occurring in Ophthalmologic Clinic of University of Michigan Between Years 1904 and 1917 M E Brownell, Ann Arbor—p 282
83 Case of Balance Ptosis. W S Conne Ann Arbor—p 286
84 Uterine Fibromyomas Complicating Pregnancy Report of Case L. L. Bottsford Ann Arbor—p 288

75 **Goiter Among Insane**—The patients examined by Kemp were all resident at the Newberry State Hospital at the time but came from various parts of the Upper Peninsula, therefore, all the cases were of the endemic type. Twenty-eight per cent of 425 women patients had goiter At least 58 per cent developed goiter since coming to the hospital Twenty one per cent of women admitted during a six year period had goiter Enlargement of the gland was not always symmetrical The right lobe more frequently showed enlargement and was often the first part affected Many cases reach a stationary point from which no further development takes place. All cases were of the cystic variety, and there was no transition to the exophthalmic type in any instance No physical discomfort was apparent which was due to enlarged thyroid gland Radical cure was affected in a few cases by surgical treatment.

76 **Epididymotomy**—Plaggemeyer suggests the following technic (1) incision on the ventral surface of the scrotum down to the vaginalis, (2) eversion of sac in toto as for a Willys-Andrews operation, (3) longitudinal incision the whole length of the tunica with a right and left oblique deflection at the lower end an inch long to form a Y This permits an eversion of the sac without incarcerating a pus sac if present at the lower end and in cases in which pus is present the small triangle of vaginalis left at the lower end is always plastically bound down and will not remain as a superfluous flap, (4) incision of abscess or abscesses, if present in the globus minor or body with a single longitudinal incision along the line of the epididymis to relieve tension (5) anchorage of the everted vaginalis with a mattress suture of No 2 chromic gut placed loosely behind the cord high up to prevent recurrence of hydrocele, which it will do in a very large majority of cases, (6) counter puncture through the most dependent portion of scrotal sac and drainage of cavity through a small rubber tube for forty-eight hours, (7) irrigation with hot normal saline, (8) replacement of testicle and complete closure of upper wound with interrupted sutures of silkworm gut. This technic is said to prevent the recurrence of hydrocele free tension, and at the same time takes care of the gross pus formation. It has been practiced by Plaggemeyer in twenty-two cases with entirely satisfactory results in each case, and with no untoward sequellae of any sort.

81 **Spirochetes in Syphilitic Placentae**—Bartholomew examined the placenta for spirochetes in fifteen cases in which syphilis was diagnosed either by the histologic appearance of the placenta or by the clinical evidences Although the spirochetes were readily demonstrated in the controls, in no case could they be found in suspected cord or placental tissue on repeated examinations In two of the cases the fetal liver was found to contain numerous organisms, easily demonstrated. In view of these results it would seem to be futile to attempt to diagnose syphilis by the demonstration of spirochetes in the placenta by the Levaditi method The examination of the fetal liver in a suspected case, coming to necropsy offers a much greater chance of success, and should be made use of as a practical method

Military Surgeon, Washington, D C

May XL, No 5

85 Carrel's Method of Wound Sterilization W H Arthur—p 489
86 Recent Developments in Camp Sanitation W L Lewis and R B Miller—p 499
87 Surgeon and Military Preparedness. L A LaGarde—p 511
88 Standardization of Food Inspection W M Garton—p 514
89 Rations for Boys' Military Training Camps. W E. Fitch—p 518
90 Organization of French Sanitary Service J R Church—p 531

Missouri State Medical Association Journal, St. Louis

May XIV No 5

91 Army as Life Vocation for Medical Men T U Raymond, St Louis—p 189
92 Intestinal Stasis Anatomy A G Pohlman St Louis—p 192
93 Roentgen Ray in Intestinal Stasis E C Ernst St Louis.—p 194
94 Influence of Intestinal Stasis on Nervous System M W Hoge, St Louis—p 197
95 Drugs in Treatment of Intestinal Stasis. E. P Buddy, St. Louis—p 200
96 Intestinal Stasis Surgery I Reder, St Louis.—p 202
97 Proctosigmoidoscope in Diagnosis and Treatment of Intestinal Stasis. H W Soper, St Louis.—p 205
98 Treatment of Intestinal Stasis by Means of Physical Therapy F W Ewerhardt St Louis.—p 205

Modern Hospital, St. Louis

May VIII No 5

99 Urban Community Plan for Health and Medical Service D B Armstrong and J H Berkowitz New York—p 309
100 New Children's Building of Tuberculosis League of Pittsburgh W C White A E. Stewart and P F Shuey Pittsburgh—p 312
101 Ice Cream Its Composition, Manufacture and Value J P Street New Haven Conn—p 317
102 Roentgen Ray Department of Cook County Hospital E. S Blaine Chicago—p 321
103 German Red Cross Hospital Train C E Wright, New York.—p 328
104 Tent Hospital for Paralyzed Children S W Boorstein, New York—p 330
105 Oklahoma Hospital Tulsa, Okla F S Clinton, Tulsa Okla—p 333
106 Immanuel Deaconess Surgical Hospital Omaha O Z. Cervin, Rock Island Ill—p 336
107 Standardization of Hospitals. J A Hornsby Chicago—p 338

New Jersey Medical Society Journal, Orange

May XIV No 5

108 Cholecystectomy vs Cholecystostomy (Technic and Complications) Treatment of Gastric and Duodenal Ulcers Relationship of Thyroid to Exophthalmic Goiter G W Crile, Cleveland—p 177
109 Renal Infection J B Squier, New York—p 182
110 Antero Poliomyelitis Review of Epidemic in Trenton. W W Stevenson Trenton—p 186
111 Plea for More Careful Practice of Dermatology W S De Vausney Newark.—p 191
112 Jejunostomy E Z Hawkes, Newark—p 193

New York Medical Journal

June 2 CV, No 22

113 Systematized Boarding Out vs. Institutional Care for Infants and Young Children H D Chapin New York—p 1009
114 Gonorrheal Salpingitis P B Bland Philadelphia—p 1012
115 Reduction of Blood Pressure by Removal of Suprarenal Gland. A MacFarlane Albany—p 1016.
116 Allergy and Vaccines in Prophylaxis and Treatment A K Detwiler Omaha—p 1020
117 Clinical Survey of Acute Pulmonary Affections of 1916 S Neuhof and B Davidson New York.—p 1022
118 Analysis of Series of Typhoid Cases S Steiner and J W Brandeis New York—p 1027
119 Technical Skill vs. Force in Management of Morphinism. C B Pearson, Arlington, Md—p 1029
120 Two Cases of Late Congenital Syphilis. H Apfel, New York—p 1032
121 Diseases of Gallbladder and Biliary Tracts M. E. Blahd Cleveland—p 1033

Oklahoma State Medical Association Journal, Muskogee

May X No 5

122 Mucous Colitis E. J Reichley Helena.—p 183
123 The Nurse. O C Klass, Muskogee.—p 186
124 Thrombophlebitis. P P Nesbitt, Muskogee—p 191

125 Fallacy of Fumigation Abuse of Tincture of Iodin Alcohol Not an Antidote to Phenol C W Heitzman, Muskogee —p 194
126 Stricture of Bowel A A Will, Oklahoma City —p 197
127 Bone Work Under Local Anesthesia W W Jackson, Vinita —p 198

Ophthalmic Record, Chicago

May, XXVI, No 5

128 Conjunctivitis Tularensis (Squirrel Plague Conjunctivitis), Report of Case. F W Lamb, Cincinnati —p 221
129 Eye Signs and Symptoms of Mongolian Idiocy C A. Wood, Chicago —p 226
130 Relation of Ophthalmologist to Military Surgery S Walker, Jr, —p 229
131 Report of Two Clinical Cases of Sympathetic Ophthalmia Shown Before Chicago Ophthalmologic Society C G Darling, Chicago —p 233
132 Ocular Therapeutic Lamp E J George and J A Toren, Chicago —p 235
133 New Incision and Crushing Operation for Advanced Cases of Trachoma, where Operation of Combined Excision of Conjunctiva and Tarsus Cartilage is Refused D W White and P C White, Tulsa, Okla —p 239
134 Simple Rapid Perimeter N W Price, Niagara Falls, N Y —p 244

June No 6

135 Case of Suspected Tumor of Pituitary Body H F Hansell, Philadelphia —p 275
136 Optic Neuritis (Unilateral) Resulting from Tonsil Infection G F Suker, Chicago —p 278
137 *An Eye Muscle Anomaly F C Todd, Minneapolis —p 280
138 Primary Progressive Atrophy of Iris L A Lane, Faribault, Minn —p 285

137 **Eye Muscle Anomaly**—The case cited by Todd was one of deviation upward of the one eye, due to overaction of the interior oblique, consecutive to congenital paresis (or insufficiency) of the superior rectus of the other eye

Rhode Island Medical Journal, Providence

June I No 6

139 Function of Liver C F Peckham, Providence —p 131
140 Study of Cardiorenal Types H. P Lovewell, Providence.—p 137

Southwestern Medicine, El Paso, Texas

May, I No 5

141 Roentgenotherapy W W Wilkinson, Phoenix, Ariz.—p 9
142 *Extension of Tuberculosis of Lungs as Shown by Roentgen Ray G E Bushnell, Fort Bayard, N M —p 15
143 Radium, Its Properties, Action and Local Application as Therapeutic Agent R Duncan, Los Angeles —p 22
144 Typhus F H Redewell, Phoenix, Ariz —p 31
145 Three Cases of Brain Tumor E B Rogers, El Paso —p 40
146 Industrial Insurance R Ferguson, Bisbee, Ariz —p 48

142 **Tuberculosis of Lungs as Shown by Roentgen Ray**—Among 984 roentgenograms of different patients at Fort Bayard, 394 showed paravertebral tuberculosis as a marked feature Only two cases of strictly apical tuberculosis were found Eighty-two patients showed paravertebral tuberculosis alone (thickened lines with studding extending toward or to the apices) Thirty-nine of the latter had not reached the apex. Forty-five of the eighty-two cases of paravertebral tuberculosis gave no definite physical signs All of the eighty-two patients had at some time shown symptoms of tuberculosis, such as cough, expectoration, pleurisy pains, bleeding, loss of weight fever, night sweats malaise etc All of the eighty-two, with two exceptions, had at some time or other had a positive sputum Of sixty-two patients in the incipient stage admitted since Jan 1, 1915, thirty-seven had no physical signs, all had or had had symptoms, all except one had or had had a positive sputum, plates of all except two showed paravertebral tuberculosis above hiluses, of these two one had a basal pleurisy, the other a few scattered foci, some of which were in the outer part of the lung

Bushnell is of the opinion that these figures give evidence conclusively of the importance of tuberculosis of the deep lung in the early history of pulmonary tuberculosis The so-called incipient cases are not truly incipient they are as a rule, detected when the deep tuberculosis has begun to invade the superficial lung, when on tuberculous lymphangitis or peribronchial bronchopneumonia there has been engrafted a larger focus of bronchopneumonia involving the cortical lung, the so-called primary lesion Truly incipient tubercle gives no symptoms Loss of weight, malaise, fever, cough and expectoration, hemoptysis, night sweats, are not symptoms of incipient but of advanced tuberculosis Their development marks in a general way the progression of the disease from the benign lymphangitic stage to that of tuberculous bronchopneumonia, whether this disease manifests itself in the form of numerous minute foci immediately surrounding the larger bronchi or of single or few larger foci in the superficial lung Physical signs of the deep tuberculosis are absent or indefinite The diagnosis depends almost entirely on roentgenographic examination.

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

May 12 I No 2941

1 Restricted Supply of Food, Its Relation to Health and Efficiency M S Pembrey —p 605
2 Three Common Intestinal Entamebae of Man, and Their Differential Diagnosis C Dobell and M W Jepps —p 607
3 *Postoperative Tympanites J D Malcolm —p 612
4 Two Cases of Pregnancy Complicated by Myoma Uteri J B Hellier —p 614
5 Technic of Cesarean Section. E F Neve —p 615
6 Gonorrhea Treated by Electrolysis, New Electrolyte C Russ —p 616
7 Therapeutic Effects of Colloidal Preparations M Morris —p 617

May 19, No 2942

8 *Punctiform Hemorrhages of Brain in Gas Poisoning F W Mott —p 637
9 *Pathology of Cardiac Dropsy C Bolton —p 642
10 Apparatus for Treatment of Fractures of Femur and of Leg V Soubbotitch —p 646
11 Glycerin and Antiseptics H P Goodrich —p 647
12 Colloids in Syphilis J E R McDonagh —p 648
13 *Hypertrophy of Nipple in Leprosy A Powell —p 649
14 Primary Carcinoma of Stomach in Boy W B Cosens —p 649

3 **Postoperative Tympanites**—In eleven cases, occurring in 1 000 consecutive operations involving the peritoneal cavity, Malcolm endeavored to prevent or cure postoperative tympanites by making a fistula In that series he obtained a death rate of 3 8 per cent During the most satisfactory recoveries from operations on the abdomen, patients frequently complain of slight, it may be very slight discomfort, nausea, or crampy pains until gases pass freely from the anus If gases do not escape downward postoperative tympanites develops, which may be removable after more or less difficulty in clearing the bowels, or may persist and be followed by death When a case of persistent tympanites is cured by making a fistula, the distention rapidly diminishes with the escape of gases and feces through the artificial opening, and the bowels act naturally after a few days, although an evacuation could not be brought about by any means before the fistula was made There is in such cases no obstruction and no paralysis of any part of the intestine All that is necessary to effect a cure is a free escape for the contents of the upper bowel and a short rest for the colon Malcolm submits that by draining the alimentary canal in suitable circumstances the mortality from abdominal operations may be reduced by a case here and there, and that patients whose lives may be saved in this way are generally suffering from an intestinal obstruction brought about by a disturbance of coordination between the muscular activity of the different parts of the alimentary canal, aggravated perhaps by mechanical, physiologic or therapeutic hindrances to the flow of the intestinal contents, the colon being the part in which difficulty most frequently arises

8 **Punctiform Hemorrhages of Brain in Gas Poisoning**—The brains in two cases of gas poisoning, in which gas was employed in an offensive by the enemy, were examined by Mott The whole of the white matter was peppered over with small dark spots about the size of a pinhead These were due to hemorrhages, but microscopic examination showed conditions which Mott has not found in carbon monoxid poisoning or in other forms of gas poisoning, in fact he says, he has never seen any condition like this The red blood corpuscles have been in large measure broken up, and the hemoglobin converted into dark chocolate colored pigment granules, which fill the capillaries, arterioles and venules of the white matter of the brain This is possibly methemo-

globin. Mott says that the reason why these punctiform hemorrhages occur in the white matter of the brain in gas poisoning is primarily due to the anatomic condition of the vessels in the white matter of the cerebrum where the arteries are terminal, each small artery having a separate capillary system, likewise the emerging veins. A tendency to stasis may be brought about in these separate vascular systems by the failure of the heart as a force pump and suction pump, also by those respiratory conditions which lead to right heart dilatation and interference with the return of blood from the skull. In most cases the two factors are combined. It seems probable however that either factor may act independently in causing inflammatory stasis and thrombosis resulting in multiple punctiform hemorrhages. In the gas case in which the hemoglobin has been converted into pigment granules it seems probable that the hemorrhage may be accounted for by embolic occlusion of the capillaries and arteries.

9 **Pathology of Cardiac Dropsy.**—The increased output of lymph giving rise to cardiac dropsy Bolton says is one of a very definite series of events following the occurrence of failure of the heart in its capacity as a pump. These events may be grouped into the following stages: Stage 1, accumulation of blood in the veins with a moderate rise of venous and capillary pressure in all parts. Abstraction of blood from the arterial system with a fall of arterial blood pressure. Stage 2, dilatation of the veins and capillaries of the central parts of the body with a fall of venous and capillary pressure to normal or thereabouts. This leads to increased congestion of the central parts and anemia of the peripheral parts of the body in which the venous and capillary pressures fall below normal. Increased output of lymph in the congested area giving rise to dropsy. Increased absorption of water in the anemic areas which balances the loss of fluid by the blood. Simple hydremia results. Stage 3, vasomotor constriction resulting from anemia of the medulla causing (1) a rise of arterial pressure to the normal; (2) a moderate rise of venous and capillary pressure in the central parts of the trunk. The venous and capillary pressures of the peripheral parts remain subnormal or may become normal. In stage 4 hydremic plethora is established and raises the venous and capillary pressures in the central portions of the body to a great height. There is still a relative anemia of the peripheral portions although to an increasingly limited extent as the congested area spreads peripherally. In stage 5 the ascites and hydrothorax increase in degree and the edema spreads in the areolar tissues peripherally as the congested area encroaches on the anemic regions. True plethora is established. The abnormal output of lymph leading to dropsy is primarily conditioned by the nutritive state of the capillary wall and is increased by the general plethora and consequent high capillary pressure. In uncompensated heart disease in man the central portions of the trunk are relieved by gravity at the expense of the legs which become included in the congested area. The dropsical area spreads up the legs to the abdominal wall thus encroaching on the anemic area from below upward.

13 **Hypertrophy of Nipple a Sign of Leprosy.**—Powell reports observations made by A. J. Kohiyar on eighty-one lepers. He found both nipples very large in sixty-two, both nipples moderately large in eight, large on one side only in two, both nipples normal in nine. Powell examined 221 cases. Both nipples were enlarged in 167, one nipple enlarged in forty-seven. The size of the nipple in the female depends on so many factors that it is of no aid in diagnosis. As a control, 200 consecutive nonleprous males were observed. In only two, that is 1 per cent. was any hypertrophy comparable to that of a leper observed.

Lancet, London

May 12, I, No. 4889

15 Gunshot Wounds of Joints: Their Pathology and Treatment. F Cook.—p 711.
16 *Direct Transfusion of Blood. A. Fullerton, G Dreyer and H C Bazett.—p 715.
17 Fragment of Shell Embedded in Internal Popliteal Nerve. J M Davidson and P Lockhart Mummery.—p 719.
18 *Oculopalpebral Prothesis. A. M Ramsay.—p 721.
19 Surgical Correction without Cicatrix of Unlovely Noses. J Bourguet.—p 722.
20 *Easily Improvised and Effective Method of Obtaining Plate Cultures of Anaerobes. W J Wilson.—p 724.
21 New Bone Clip for Treatment of Fractures of Long Bones. J E Adams.—p 725.
22 Question of Economy in Food. M S Pembrey.—p 732.

May 19, No. 4890

23 Paratyphoid Infection. C H Miller.—p 747.
24 Trench Shin an Infectious Fibrositis. G Chambers.—p 752.
25 Amebic Dysentery and Its Relationship to Form of Diarrhea Occurring in Egypt. G M Findlay.—p 755.
26 Treatment of Gonorrhea in Field Ambulance. F T Burke.—p 756.
27 Retrograde Strangulation of Intestine from Constriction by External Aperture. S Mort.—p 758.
28 *Treatment of Varicocele by Excision. P Turner.—p 759.
29 Case of Gunshot Wounds of Face and Thighs; Edema of Glottis; Death under Nitrous Oxid Anesthesia. G H Colt.—p 760.
30 Method of Suturing Ruptured Perineum. W H Bishop.—p 761.

16 **Direct Transfusion of Blood.**—In the method described by the authors transfusion is effected from a small artery to a suitable vein. The apparatus used consists of two glass or silver cannulas connected by a short length (about 7 inches) of india rubber tubing, the whole being coated within and without by a thin layer of wax made by mixing hard and soft paraffin. The paraffin mixture consists of about equal parts of the constituents, or these should be mixed in such proportions as to set at a temperature between 43 and 48 C, the optimum being about 45. This mixture may be used again and again but should be strained occasionally to ensure its freedom from solid particles. The rubber tubing can be used several times if necessary, but it is preferable to renew it for each operation. Coating is effected by immersing the apparatus in the paraffin mixture in a bath, the temperature of the mixture being kept at about 130 C. Sterilization of the cannulas and tubes is thus effected. The connected cannulas and tubes are allowed to fill with the mixture, care being taken to avoid air bubbles. The apparatus is then held vertically by seizing the smaller cannula and the fluid is allowed to run out of the end of the larger. The last drops are removed by drawing the end of the dependent cannula lightly across sterile gauze. The coating is allowed to set and the tubes are then wrapped in sterile material ready for use. If the tubes and cannulas are coated in this way no clotting need be anticipated, as in experiments on animals no clotting has been found after two and one-half hours. Should clotting take place it will be found to be due to excessive injury to the vessels, especially the artery, or to damage to the coating of the tubes from rough handling.

18 **Oculopalpebral Prothesis.**—Ramsay uses an ecblepharon fitted to a spectacle frame.

20 **Method of Obtaining Plate Cultures of Anaerobes.**—The distinctive features of the methods described by Wilson are the interposition of a perforated circular disk between plate culture and vessel containing alkaline pyrogallate solution.

28. **Treatment of Varicocele by Excision.**—Turner describes his method as follows: The spermatic cord is exposed by the usual incision just below the external abdominal ring, the cord enclosed in its fascial covering is then freed and drawn out of the wound. With a knife or a sharp pair of scissors a longitudinal incision an inch or an inch and a half in length is made through the fascial coverings in front until the veins are exposed. The middle of the incision is secured on each side by a pair of Spencer Wells forceps which act as retractors. With a blunt dissector the veins are separated from the sheath on each side until the vas, which is situated behind and is more closely connected with the sheath, is reached. The anterior three fourths or so of the venous plexus including all the dilated veins, are then separated, leaving the remaining veins with the vas, which is not touched and is not separated from the sheath. The anterior mass of veins is now drawn downward and a little dissection frees them as high as is thought desirable. Next they are drawn upward and the separation can now be effected as low as the top of the tunica vaginalis. The separated group of veins is now ligatured above and below and the interven-

ing part is cut away The ends of both the ligatures are cut short and the testicle is replaced in the scrotum The sheath is now shortened by retracting the lateral margins of the longitudinal incision and closing this by a fine continuous catgut suture in the transverse direction It is well first of all to approximate the upper and lower angles of the incision with forceps and to observe what effect this has on the position of the testicle As a rule, it raises it to a slightly higher level than the testicle of the other side, but if further elevation is considered desirable the length of the original incision can be increased All bleeding points are then secured, and the wound is closed in the usual way The great advantage of this operation is that the opening in the sheath is completely closed, and hence the cord and the divided veins do not become adherent to the surrounding tissue The tender inflammatory nodule around the site of the operation is absent or only very slightly marked, while the testicle remains suspended in a normal manner in the scrotum at a higher level with its mobility unimpaired

Annales de Médecine, Paris

March April, IV, No 2, pp 109 228

31 *Cholesterinemia in Paratyphoid Fever G Etienne, R Jolly and J Mondelange—p 109

32 *Meningitis from Otitis Without Suppuration in the Tympanum, Two Cases Baldenweck and Roger—p 127

33 Evolution of Pleurisy at the Apex in the Tuberculous E Sergent and German—p 140

34 *Protuberant Abdomen in Soldiers (Les gros ventres de la guerre leur pathogenie, les erreurs qu'ils entrainent) D Denechau and H Mattrais—p 147

35 *The Urologic Phenomena with Epidemic Meningitis III P Cazamian—p 165

36 The Clinical Features and Pathologic Anatomy of Complete Severing of the Spinal Cord, Fifteen Cases G Guillain and J A Barre—p 178

31 **Cholesterinemia in Paratyphoid Fever**—In the seventeen patients with paratyphoid fever the cholesterin content of the blood was below normal during the disease and above normal as they became convalescent, finally settling down to the normal figure, 1 5 gm This range is like that observed in typhoid When a relapse was impending there was no rise in the cholesterin content or it dropped to subnormal figures The mechanism seems thus to be similar to that of other defensive processes of which sero-agglutination is the witness or the translation

32 **Otitic Meningitis without Suppuration in the Middle Ear**—Baldenweck and Roger refer to meningitis which appears as the first objective clinical manifestation of a nonsuppurative otitis The four different ways by which the infection can be transmitted are described, with two cases with necropsy, showing that this complication may occur even with an infection in the middle ear too mild to have attracted attention

34 **Protruding Abdomen in Soldiers**—Among the puzzling cases described was one in which a man was able by muscular action to cause his abdomen to protrude to such an extent that, as he complained of pains and vomited, gastro-enteritis or lumbar Pott's disease was assumed and he was kept in the hospital for months In another case the diagnosis of tuberculous peritonitis seemed unmistakable, and treatment was applied on this basis, but flexing the thighs on the abdomen as the man reclined caused the protruding abdomen to recede In all the nineteen cases described, with several illustrations, there had been at first some functional disturbance Roentgenoscopy revealed that abnormal excursions or positions of the diaphragm were mainly responsible, aided by relaxation of the abdominal walls, and possibly a vicious attitude of the pelvis or lower spine There was *no* general ptosis in any instance By gentle continuous pressure on the abdomen, the diaphragm can be forced up and the abdomen then subsides at once to a normal outline These "war abdomens" are analogous to hysteric tympanites and "nervous pregnancy" The aspect of the abdomen was like that of a six or seven months' pregnancy

35 **The Urine in Epidemic Meningitis**—In two previous articles on the "urologic syndrome" in meningococcus meningitis, Cazamian discussed the polyuria and elimination through the kidneys He here describes conditions in regard to elimination of albumin, sugar, indican and urobilin as determined in 113 meningitics He never found bile pigments, biliary acids or bodies of the acetone series in any of these cases Albuminuria was the rule, but it was transient Its prolonged persistence is more important for the prognosis than its intensity at any time He is inclined to regard it as of central origin, with perhaps some liver element, but not connected with the condition of the kidneys Urobilinuria was encountered in about 75 per cent of the cases, it seemed to appear or disappear in waves of a few days, but was highest in the early stages

Bulletin de l'Académie de Médecine, Paris

May 1, LXXVII, No 18 pp 555 574

37 *The Use of Saccharin in Place of Sugar Pouchet and Others—p 556

38 Ozone in Treatment of Experimental Peritonitis O *Laurent*—p 560

39 Persistence of Effects of Concussion After Trephining for War Wounds of the Skull L Mac Auliffe and A Carel—p 566

40 *Experimental Research on Cornmeal E Weill and G Mouriquand—p 569

41 *Intravenous Quinin Treatment of Malaria F Barbary—p 570

37 **Regulation of Use of Saccharin**—In the discussion of the report from a committee that had been studying this subject, Reynier declared that his extensive laboratory and experimental research on saccharin demonstrated that it is not at all toxic He kept for ten years, without its spoiling, a meat bouillon containing 3 per cent saccharin He also kept fishes in saccharinated water for months at a time, and they did not appear to suffer Dogs and guinea-pigs given large amounts of saccharin in their food increased normally in weight As saccharin is eliminated unmodified in the urine, he gave it as an antiseptic to patients with pyelonephritis and purulent cystitis In doses up to 4 or 5 gm a day, kept up for months, the patients bore it well, and had no digestive trouble In some the urine became acid and the general condition improved On the other hand, the committee, as a whole, regard saccharin as liable by its antidiastasic action to interfere with the normal phenomena of digestion When some function is disturbed, even in a slight and transient manner, but repeatedly or constantly, conditions are created which predispose to a definite lesion For this reason the committee disapprove absolutely of the addition of saccharin to food Pouchet declared that when condensed milk is put up with saccharin, gastro-intestinal accidents are liable to occur Robin and Hayem stated that they had several times observed an injurious influence from saccharin when taken in too large quantities, especially by diabetics The Académie adopted the committee report without modification It specified as the articles in which the use of saccharin is permissible wines (except medicinal wines), ciders and pear cider, brandy, liqueurs (except for articles destined for exportation), lemonade, coffee and tea. For the following articles the use of saccharin should be forbidden beer, preserves, jellies, marmelades, stewed fruits, cakes and pastry, cocoa, chocolate and condensed milk and household drinks The third and last group included articles for which saccharin is forbidden, but they could be dropped entirely from the bill of fare without harm from an alimentary point of view, namely, syrups, ices, sherbets, candy and fancy desserts

40 **Cornmeal in War Bread**—*Weill and Mouriquand* report experiments on pigeons which sustain the assumption that cornmeal should not be bolted as this removes certain elements of vital importance

41 **Treatment of Malaria**—Barbary has been treating malaria during the last ten months by intravenous injection of 0 5 gm quinin in 125 gm of physiologic saline, with 1 gm. of ethyl carbamate He has thus treated 899 patients with malaria at the military Hospital at Nice, and expatiates on the prompt and effectual action of this route The injections were given every third day at first and then at five day intervals

Paris Medical

May 5 VII No 18 pp 341-388

42 The Tuberculous Origin of Psoriasis E Gaucher—p 342.
43 Factitious Eruptions and Ulcers. G Milian—p 343
44 The Present Diversity in Treatment of Syphilis. Hudelo—p 351
45 *Problems in Syphilis That Call for Special Study Sabouraud—p 369
46 *Epinephrin Combats Iodin Poisoning C Milian—p 374
47 Treatment of Suppurating Dermatitis. (Les pyodermites et leur traitement dans une ambulance d armee) Carle—p 376

45 **Problems in Syphilis.**—Sabouraud remarks that it used to be said of Fournier that he wanted to make of general pathology merely an annex to syphilography but time has proved him right and that he even did not go far enough The extent to which inherited syphilis is a factor in lupus has never been investigated Sabouraud is convinced that in many cases of lupus, treatment should be given both for syphilis and tuberculosis Syphilis as a factor in leg ulcer also deserves attention The question as to the subsidence with age of the Wassermann reaction in inherited syphilis is another question that should be studied, as also the gravity of acquired syphilis in those who had inherited it He declares that the effectual treatment of inherited syphilis has not been worked out systematically yet It would be very instructive to have the curve of the Wassermann reaction over ten years for even ten patients with inherited syphilis but nothing approximating this has been published yet Another subject that needs study is the so called conceptional syphilis The seroreaction of the wife of an old syphilitic is often semipositive even when there has been no pregnancy He urges that the Wassermann test should be applied regularly to the consorts of the syphilitic in order to ascertain more about this demicontamination Persevering systematic research along the above lines may throw light on prophylaxis and treatment

46 **Epinephrin Combats Iodin Intoxication.**—Milian tells of the prompt arrest of symptoms of severe iodism under epinephrin in a man taking a vigorous course of potassium iodid The symptoms could be banished at once by giving epinephrin, or their appearance prevented by giving the epinephrin along with the drug The preventive and curative action of epinephrin in regard to iodism is important not only because it will allow us to push potassium iodid without fear but also theoretically as it shows that the iodin symptoms come from suprarenal insufficiency 'Thus topples over one more of the old idiosyncrasies'"

Presse Medicale, Paris

April 26 XXV No 24 pp 241-248

48 *Partial Rupture of Abdominal Rectus Muscles. H. Hartmann—p 241
49 Injections of Colloidal Mercury Plus Sulphur to Reactivate Wassermann Reaction A Bergeron and C Jouffray—p 241
50 Primary Suture of War Wounds P Dezarnaulds.—p 242
51 Pinching Test for Trunk Nerve in Course of Operations on Peripheral Nerves (*L' epreuve du pincement tronculaire*) J A. Sicard and C Dambrin—p 243

48 **Rupture of Rectus Muscle**—In both of Hartmann's cases the rupture occurred during an attack of coughing One patient was a healthy man of 42 who felt a sudden sharp pain in the lower left hypogastrium and a small hard protuberance developed in the abdominal wall at that point with some tendency to ecchymosis In the second case the diagnosis of appendicitis had been made and no heed was paid the woman s account of her sudden feeling of laceration in the right abdomen coming on during an attack of coughing The abdomen was distended and painful, with vomiting and retention of urine and the wall of the right lower abdomen was tender, while a tumor could be palpated in this region The tumor could not be pushed down into contact with the vaginal wall, although certain other findings suggested an ovarian cyst on a long pedicle At the laparotomy the peritoneum was found sound except at one point where it bulged a little and looked brownish This suggested a subperitoneal hematoma consecutive to partial rupture of a muscle which proved to be the case. The *rupture of the deeper portion* of the rectus had induced reflex phenomena simulating a peritoneal affection In a similar case on record the symptoms had suggested internal strangulation, in nine reported by Quenu there seemed to be appendicitis, but in all the trouble was merely a subperitoneal hematoma in contact with the peritoneum but without any inflammation in the latter

Progres Medical, Paris

May 5 XXXII No 18, pp 147-154

52 *Sciatica Zona and Skin Affections as Signs of Incipient Tuberculosis (Propathies revelatrices de tuberculose pulmonaire) J Raymond—p 147
53 War Wounds of the Eyeball M Bourdier—p 149 To be continued
54 Injury from Metallic Dust in the Lungs in Munition Workers (Forme nouvelle de pneumokoniose) J Renoux—p 151

52 **Localized Nervous and Skin Affections as Heralds of Tuberculosis**—Raymond cites a number of cases from his own and the experience of others in which the sudden appearance of sciatica zona psoriasis or nodular erythema was followed by manifestations of pulmonary tuberculosis The connection between them was unmistakable and the data reported confirm the necessity for close examination for possible *pulmonary* lesions when any of these propathies of pulmonary tuberculosis" as he calls them are encountered Each testifies to the injury of some nerve or nerves from toxins generated by bacilli, usually tubercle bacilli

Correspondenz-Blatt für Schweizer Aerzte, Basel

May 5 XLVII No 18 pp 545-592

55 Occurrence and Spread of Fat Embolism A Katase—p 545
56 Progressive Spinal Muscular Atrophy in Insane Woman P Skelow—p 551
57 An Iron Lecithin Preparation in Experimental Anemia (Wirkung von [illegible] bei experimentell anämisierten Kaninchen) B Libin—p 553

55 **Fat Embolism**—Katase tested for fat droplets the lungs from 120 cadavers There had been a fracture in only nine, and in one of these no fat was found in the lungs In the other 111 cases large amounts of fat were found in 2.7 per cent. considerable fat in 3 6 slight amounts in 16 2, minimal in 33 3 and none in 44 2 per cent The males formed 54 per cent of the total Slight amounts of fat were found in three children under 10 and considerable amounts in two others The extreme amounts were found exclusively in three persons between 50 and 80 None of the cadavers were corpulent, most of them were lean In the three extreme cases of fat embolism there was parenchymatous nephritis as also in two of the child cases with considerable fat one of these children had the typical thymic-lymphatic status the other hypertrophy of mesenteric lymph glands In two other cases of parenchymatous nephritis there was no or minimal fat to be found in the lungs No history of trauma or concussion of any kind could be learned in respect to any of the cadavers with much fat and no fracture was found in any of the 111 cases analyzed. The findings suggest however, that severe kidney disease is responsible to a more or less extent for fat embolism but the mechanism for this is still obscure

Gazzetta degli Ospedali e delle Cliniche, Milan

April 5 XXXVIII No 27 pp 417-432

58 *Meningitis Commencing with Gastro Intestinal Symptoms Andruetto—p 417

April 8 No 28 pp 433-448

59 *Treatment of War Wounds (La chimiatria antisettica) Schiassi.—p 433

58 **Atypical Meningitis**—In the two cases reported the men had been under treatment for one and two weeks for severe gastro-intestinal trouble *vomiting, pains* and diarrhea, when the discovery of the stiff neck gave the clue to the true trouble confirmed by lumbar puncture The fluid in one case at first was limpid and only on standing could a few flakes of fibrin be detected, but the pressure was high in both cases

59 **Treatment of War Wounds**—Schiassi has long been emphasizing the advantages of treating war wounds by inducing an intense flow of fluids outward, by exosmosis from the depths of the wound outward He defines the process as an 'exhumoral expulsive cellular antisepsis," supplemented by

an intense plasmatic and histologic defense and regeneration The solution he uses for the purpose is a mixture of 8 gm sodium chlorid, 0 3 gm potassium chlorid, 1 gm calcium chlorid, 1 5 gm glucose and 1,000 c c water For stronger action, he adds to the above, 2 gm sodium citrate and 0 5 gm sodium hydrate This fluid disintegrates dead tissues and draws fluids out of the tissues as if by suction This exosmosis is further promoted by keeping the part in a hot bath for hours at a time (39 C)

Policlinico, Rome

May 6, XXIV, No 19, pp 609 640

60 *Gangrene in the Wounded I Tansini —p 609
61 Treatment of Septic Wounds L Silvestrini —p 614
62 *Biologic and Pathogenic Importance of Lack of Vitamins in Soldiers' Rations P Ramoino —p 616

60 **Gangrene in the Wounded**—Tansini discusses the gangrene with "trench foot," gas and simple gangrene He says that the hope of benefit from oxygen has had to be *abandoned*, but good results have been obtained in many gas cases by prompt excision into sound and bleeding tissue It is important to refrain from severing the entire muscle or group of muscles, but they can be slit over long distances with comparatively little harm Excellent results have been obtained with these multiple long incisions, extending far beyond the part affected, at intervals of 6 or 7 cm Through these incisions the muscles and fascia are worked apart, down to the bone, as the primary and most virulent gaseous focus is deep, and often some deep hematoma is a favoring factor From this deep focus the gangrene spreads in all directions The gangrenous tissues are best cut out with the actual cautery If the gangrene is absolutely massive, he advises immediate and high amputation but, in case of doubt, multiple long incisions and exploration in the depths The incisions may have to extend from the foot to the root of the thigh

62 **Vitamins in Soldiers' Rations**—Ramoino remarks that the soldier now on the firing line, "which is equivalent to saying in the trenches," is unable to supplement the ration given him, as under other conditions he can do He is like an animal in a laboratory experiment fed in a certain way to study the effects of the restricted diet The vicissitudes of weather, emotional stress and confinement do not depress the resisting powers as much as might be expected until conditions prevent an ample and varied food supply Then the men lose appetite and force, but they do not seem to be sick Gradually, however, gastro-intestinal disturbances develop, constipation alternating with diarrhea, the latter mostly at night Herpes, eczema and epistaxis are common, the gums bluish, the breath fetid There are often also pains in joints, muscles and head, with progressive loss of weight, dulness and melancholia, but no fever In five cases there was considerable edema All these disturbances generally subsided when vegetables and fruit could be obtained The soldiers' ration, he continues, has been calculated on the basis of muscular work and contains too much protein, especially for men from the rural districts who are not accustomed to much meat The Italian ration lacks vitamins, especially the antiscurvy vitamin The men in the trenches, who need them most, get a vitamin-poor food The ration contains the antiberiberi vitamin but none of the antiscurvy vitamin When this is supplied, the men regain strength and good spirits He recalls that with the introduction of the potato into Europe, the great epidemics of scurvy ceased to appear further The distribution of lemons among the men in the trenches was found particularly advantageous, and he advises this whenever canned meat, etc, has to be used much It is better also, he found, to restrict the amount of boiling to the minimum

Riforma Medica, Naples

April 21 XXXIII, No 16, pp 421 448

63 Advantages of Intravenous Injection of Colloidal Gold in Typhoid Thirty Two Cases R Massalongo and S Vivaldi —p 421 Commenced in No 15, p 397
64 *Intradermal Vaccine Reaction in Typhoid and Paratyphoid M Pennetta —p 427
65 Centrifugal Massage for Frostbite A di Luzenberger —p 429
66 *Postoperative Brachial Monoplegia V Federici —p 431

64 **Intradermal Reaction in Typhoid and Paratyphoid**—Pennetta used a vaccine with typhoid or paratyphoid bacilli, killed with heat, applying it by the Mantoux intradermal technic The response was constantly negative in the sick with other affections while it was positive in ten of fifteen cases of typhoid, in three of five paratyphoid A, and in nine of ten paratyphoid B as also in two of eight convalescents from typhoid It was also positive in eight of eleven recently vaccinated patients In all the other patients, as also in ten healthy persons, no reaction was apparent The test may thus prove useful in differentiating incipient cases and in the first and second weeks It elicited a positive response in 73 3 per cent of the typhoid affections He did not apply the test in the especially severe cases

66 **Postoperative Paralysis**—Federici reports a case of motor paralysis of the left arm after a laparotomy The arm had not been fastened or constricted but had been held slightly raised and abducted for a time A nervous predisposition and the shock of the operation evidently cooperated As the paralysis was absolutely peripheral he thinks the chloroform anesthesia had nothing to do with it

Prensa Medica Argentina, Buenos Aires

April 20, III No 32 pp 341 351

67 *Painful Persistent Priapism J A Esteves and R Chiappori —p 341 Commenced in No 31, p 336
68 *Cancer of the Lung F C Arrillaga —p 346
69 Spasm of the Colon with Transient Obstruction C B Udaondo —p 348

67 **Persistent Priapism.**—In the case of persistent priapism reported there was at first hyperesthesia of the perineal region and some contracture of the perineal muscles, with exaggeration of the cremaster and tendon reflexes, but under operative treatment approximately normal conditions in all respects were restored In certain other cases on record the priapism gradually subsided spontaneously, after a few weeks or a month or two, but further functioning was entirely abolished In the cases given operative treatment, function was restored Three theories have been advanced to explain persistent priapism, thrombosis, hematoma or nervous spasm In the case here reported, the unmarried man of 55 had had for some time unusually protracted erections He entered the hospital when the erection had lasted for two days The tenth day each corpus cavernosus was punctured with a large trocar, at about the center Blackish fluid blood was aspirated and squeezed out By the next day the man was much relieved and free from pain, and there was no further erection although parts of the corpora cavernosa felt abnormally hard and both were somewhat larger than normal Since then conditions and function have been approximately normal except for the patches of induration in the corpora cavernosa still evident after six months Esteves and Chiappori incriminate these fibrous changes as responsible for the upset in the mechanism of erection The corpora cavernosa had lost their elasticity and contractility This is demonstrated among other facts by the way in which the blood at the puncture has to be aspirated in such cases, instead of its spurting as under normal conditions The data cited impose the necessity for operative treatment at once This relieves the patient's suffering and wards off further local trouble They advise general anesthesia to begin with If the erection still persists puncture or incise one or both of the corpora cavernosa Leukemia or miliary tuberculosis have been noted in some *of the cases on record* Terrier found a record of splenic leukemia in sixteen of forty-eight cases of his compilation Priapism may be a precursor of leukemia

68 **Carcinoma of the Lung**--The man of 37 had neither pain, dyspnea, chronic cough nor expectoration when he entered the hospital He was occasionally taken with a spasm of coughing during which he expelled scraps of tissue which proved to be cancer tissue, one an inch and a quarter long by half an inch wide He had been previously in good health but the cancer proved fatal in three months after the first symptoms, pain and cough, which later had subsided completely except for the rare paroxysms of coughing

Semana Medica, Buenos Aires

March 22, XXII, No. 12, pp. 343-370

70 Seborrheic Desquamating Erythrodermia. E. Bordot and R. D'Ovidio.—p. 343.
71 The Rise and Fall of Certain Medical Measures. (La caída de las hojas.) A. D. Meandro.—p. 348.
72 Lymphocytosis Characteristic Finding in Blood of Syphilitics. C. P. Mayer and A. C. Courdy.—p. 359. Continuation.
73 The Problem of Castration in Mammals. A. E. Pardi and A. Widakowich.—p. 363.

March 29, No. 13, pp. 371-398

74 Bites of Poisonous Spiders. (Aranidismo.) P. P. P. Garcia.—p. 371. (Picaduras de arañas venenosas.) B. A. Houssay.—p. 382.
75 Advertisements of Nostrums in the Lay Press. (Propaganda del curanderismo en la prensa.) J. A. Lopez.—p. 383.
76 Tuberculous Meningitis in Infants. E. Bordot and R. D'Ovidio.—p. 385.

70. **Desquamating Erythrodermia.**—Bordot and D'Ovidio summarize thirty-four cases of what they call Leiner-Moussous' disease. They explain it as a seborrheic desquamating erythrodermia of toxic origin, the consequence of the accumulation of toxins from defective digestion. It is most common in the winter and disappears completely during the summer. It seems to affect exclusively breast fed children and develops in them within the first forty-five days of life. The best treatment is breast milk at intervals of fully four hours, a total of only five feedings in the twenty-four hours. The general condition did not seem to suffer after subsidence of the skin affection, the children developing normally thereafter.

72. **Lymphocytosis in Syphilis.**—See abstract 80 in The Journal of March 17, 1917, p. 884.

74. **Spider Bites.**—Garcia reviews considerable South American literature on this subject, citing eleven kinds of spiders the bites of which are known to be more or less poisonous. The symptoms seem to be of four types, local necrosis, the icteric, exanthematous and neurotoxic. The local process of defense in the necrotic and exanthematous types generally suffices to ward off further trouble. He reiterates that spider bites are *not* fatal. Cerrutti, notwithstanding the severity of the clinical picture in some of his more than 100 cases, had no deaths, and Garcia could find no record of fatalities from spider bites except with preexisting disease of the heart, liver or kidneys.

He reports in detail four cases personally observed, saying that as the insect is seldom caught or killed, it is impossible to be sure of the species, and no antiserum is available. In his cases, besides symptomatic measures, he gave a subcutaneous injection of serum against snake bites, although knowing that it has no specific action in spider bites. The bitten area should be isolated with a tourniquet, never leaving it on for more than half an hour. The poison should be removed by incisions, cauterization, aspiration or be destroyed in situ if it has not yet been absorbed. Lacerda advises for this a 1 per cent. solution of potassium permanganate, injecting it into the lesion and around it. This neutralizes the toxin in vitro. Kaufmann uses 1 per cent. chromic acid, Halford 10 or 20 drops of a 50 per cent. solution of ammonia, injected into a vein, and Calmette a few cubic centimeters of a 2 per cent. solution of calcium hypochlorite. As the chlorin gas is liberated it may act at a distance if the poison has been absorbed. The region can be dressed with a 1 per thousand mercuric chlorid solution or 4 per cent. boric acid, or with potassium permanganate.

Houssay's research has failed to show any *hemolysins* in the poison of spiders. He also states that his extensive study of the subject has shown that very few species are poisonous, and that even with the poisonous species accidents are rare except with the *Latrodectus mactans*. [The spiders of this extremely venomous lactrodectus family are small, black and spotted with red.] No antisnake venom serum neutralizes spider poison. He is convinced that some local or general infection complicating the spider bite was responsible for the disturbances in many of the cases that have been published.

76. **Tuberculous Meningitis in Infants.**—Bordot and D'Ovidio state that among 5,000 infants brought to the consultations at the Mejia Hospital in six years there were only fifteen known to have tuberculous meningitis. The diagnosis was confirmed by inoculation of animals in the majority. In only two of the cases was there a history of preceding acute infectious disease, whooping cough or measles. The irregularity of the symptoms is a special feature of meningitis in the younger infants and is liable to prove misleading. Somnolency and rapid loss of weight are always present, the weight dropping by 40 or 50 gm. a day. The child sleeps night and day, never crying for its food, and it is constantly indifferent to what is going on around. The face has a waxy tint and the pupil reactions are sluggish. The cerebrospinal fluid shows abnormally high albumin content. The ages ranged from 2 months and 11 days to 11 months in the fifteen cases, all dying in from eight to thirty days. The writers know of only two cases of recovery in young infants on record, Garciso's case in 1903 and Morquio's case in a boy of 2 who seemed to recover complete health but he died a year later.

Siglo Medico, Madrid

April 28, LXII, No. 3307, pp. 285-304

77 Vaccine Therapy of Staphylococcus Skin Disease and Buboes. Arna.—p. 286. Concluded in No. 3308, p. 306.
78 Intraspinal Treatment of Cerebrospinal Syphilis, Tabes and Progressive Paralysis. G. R. Lafora.—p. 292. Commenced in No. 3304, p. 276.

78. **Intradural Treatment of Cerebrospinal Syphilis.**—Lafora relates that he has applied the intradural administration of mercurialized serum according to Byrnes' technic (The Journal, 1914, 63, 2182) in treatment of five cases of tabes, two of old syphilitic myelitis and three of progressive paralysis. He has now under treatment a case of atrophy of the optic nerve from basilar meningitis and one of five year old syphilis. He summarizes the details of the more typical cases and gives specimens of the handwriting in one of the paralysis cases, showing the progressive improvement, comparing the results with those that have been published by others. He combined the intraspinal treatment with intravenous, and regards this as the ideal combination for treatment of syphilitic and parasyphilitic affections of the nervous system, saying that it does not seem to be toxic when applied cautiously and in not far advanced cases. It is the preferable method for tabes, as it cures the early cases, he reiterates, and improves in all cases better than any other method of treatment. In general paralysis his results were also better than with other methods; in the early cases it seems to cure, but time alone can decide this.

Russkiy Vrach, Petrograd

XVI, No. 6, pp. 121-144

79 Influence of Surgery on Outcome of War. M. I. Rostovtseff.—p. 121.
80 Influence of Sulphur Saline Waters on General Metabolism. B. I. Slovtsoff and A. N. Tchernevsky.—p. 123. To be continued.
81 War Wounds of the Carotid Artery. Five Cases. V. I. Savin.—p. 126.
82 Comparative Wassermann and Stern Reactions. A. A. Melkikh.—p. 128.
83 Treatment of Traumatic Aneurysms. V. E. Salishtcheff.—p. 132.
84 Oxidation of Iron as the Chemical Basis of Vital Phenomena. N. A. Sakharoff.—p. 135.
85 Experimental Cholesterinemia and the Disturbances It Induces. N. N. Anichkoff.—p. 136. Commenced in No. 4, p. 89.

82. **Comparative Wassermann and Stern Biologic Tests.**—Melkikh's communication reports the findings with parallel Wassermann and Stern tests applied to 2,500 persons. The Stern technic seems to be more sensitive, giving positive results in more cases than the Wassermann, and it was never negative in any case giving a positive Wassermann. When the Stern was positive and the Wassermann negative, it sometimes proved possible to obtain a positive Wassermann reaction by taking more serum or by applying the Wechselmann technic. The antigen must be carefully tested in relation to normal serum. Sometimes under treatment the Stern reaction may persist positive after the Wassermann has veered to negative. Treatment should be continued until both are negative, he reiterates.

85. **Pathologic Effects of Experimental Cholesterinemia.**—Anichkoff has been experimenting with cats, as meat eating

animals, rats and rabbits, pouring into their stomach through a stomach tube a 4 per cent solution of cholesterin in sunflower oil in amounts up to 20 c c Fat infiltration with cholesterin esters was evident in the liver, the endothelial apparatus, suprarenal cortex and the walls of the arteries after a month or so of this alimentary hypercholesterinemia These reactive and degenerative changes seem to correspond, he says, to human atherosclerosis, xanthelasma, and certain types of liver and suprarenal derangement

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

March 31, I No 13, pp 977 1076

86 *The Borderland of Saprophytism (Het grensgebied van commensalisme en parasitisme) J J Van Loghem —p 994
87 *Blue Sclerotics, plus Fragility of Bones and Deafness J Van der Hoeve and A de Kleijn —p 1003
88 The Diazo Reaction No Guide in Prognosis of Tuberculosis in Children J B Schwab —p 1010
89 Tumor in Liver Simulating Laennec's Cirrhosis R. Remmelts —p 1013

86 **Parasitic Symbiosis of Bacteria** —Van Loghem defines three types of parasitic symbiosis mutualism, in which both host and parasite benefit, commensalism, in which the host does not suffer but only the parasite benefits, and parasitism, in which the host suffers and the parasite benefits He then discusses the borderland between the last two forms, saying that a typical instance of this phylogenesis of parasitism is the sequence formed by the colon bacillus—paratyphoid—typhoid group Similar transitional sequences are encountered in the dysentery bacilli group, as he describes in detail More attention should be paid to this promising field embracing the borderland between commensalism and parasitism, as it contains much that is of importance for epidemiology

87 **Blue Sclerotics and Other Anomalies in Family** —Van der Hoeve gives the family tree through four generations of a family in which eleven of the twenty-two members had blue sclerotics, extremely fragile bones and otosclerosis Fractures and curvature of bones were common, and nearly all the members of the family were delicately built Seven of the nine personally examined had syndactylia The grandfather and four of his six children presented the trio of anomalies and six of the seven children of one of the sons affected, but all the seven other grandchildren escaped

Hospitalstidende, Copenhagen

April 25, LX, No 17 pp 393 416

90 *Pains and Contracture of Fingers after Injury of Ulnar Nerve, Two Cases A V Neel —p 393

90 **Painful Contracture of Fingers after Injury of Ulnar Nerve** —Neel has found only two cases on record similar to the two from his own practice which he describes in detail The contraction was extreme only in the little finger and the one next to it, and the intense pains were restricted to the ulnar side of the hand This entire region was also extremely tender The thumb and forefinger were normal There was a history of trauma of the ulnar nerve in all, single in three, and repeated, occupational injury in the fourth This latter patient improved progressively after a change to another occupation

Norsk Magazin for Lægevidenskaben, Christiania

May LXXVIII, No 5, pp 505 640

91 *Progressive Bulbar Paralysis plus Progressive Spinal Muscular Atrophy in Adult Brothers L Sommerfelt —p 505
92 *Roentgen Examination of Motor Functioning of Stomach B Kjørstad —p 545
93 Fatal Intestinal Hemorrhage from Angiomatosis in Man of Forty One J Borchgrevink —p 552
94 Multiple Nodules, Simulating Tumors, with Chronic Peritonitis E Platou —p 560
95 Case of Total Lateral Situs Inversus H Hopstock —p 566
96 Apocynum in Treatment of Insufficiency of the Heart. (Cymarin og apocynum ved hjerteinsufficiens) H Salvesen —p 576

91 **Progressive Bulbar Paralysis** —Sommerfelt calls attention to the cases he reports in two brothers, men of 43 and 57, who both developed progressive bulbar palsy The younger man had been previously healthy As the bulbar paralysis continued its insidiously progressive course, progressive spinal muscular atrophy also became installed after twelve or eighteen months, and the man died by the end of the second year The other patient was healthy until the age of 31 when he had a subacute attack of poliomyelitis which left him with slight bilateral quadriceps paresis Twenty-three years later, six years after his brother had died from bulbar paralysis, he also developed a typical case of it, progressive spinal muscular atrophy also developing after a year Necropsy in both cases confirmed the clinical diagnosis of these associated affections Both men complained of severe pains, this is an unusual symptom with nuclear amyotrophy The pains were mostly restricted to one side, although the muscular atrophy was pronounced on both sides Nothing could be found to explain the younger brother's pains in his chest

Sommerfelt has compiled from the literature fifty-nine cases of progressive spinal muscular atrophy, and all but seventeen showed a familial or inherited tendency He has found only three instances on record of familial progressive bulbar paralysis, in mother and son, or in two brothers Progressive external ophthalmoplegia has been noted in the same family by six clinicians Amyotrophic lateral sclerosis has also been encountered in father and two children (Gee), in four sisters (Seeligmüller) and other familial cases have been published by other clinicians He lists the titles of 105 articles on the subject. They demonstrate the possible familial tendency for myelogenous nuclear muscular atrophy, but show that it is rare The records also show that when it developed after acute poliomyelitis only males were affected, and also that it developed at an earlier age than under other conditions, under 25 in 50 per cent of the thirteen available cases, and in over 25 per cent between 25 and 35 The interval ranged from two to seventy years Only one of the nineteen patients was a woman, and in this case the trouble began with external ophthalmoplegia Primary progressive spinal muscular atrophy affects both sexes nearly alike, as also acute poliomyelitis In Leegaard's compilation of 3,290 poliomyelitis cases 55 57 per cent were males It seems plausible to assume that the severer use made of the muscular system by men exposes those who have had acute poliomyelitis to greater danger of progressive spinal muscular atrophy later than women, whose musculature and nervous system are not subjected to such strain He urges investigation of the kind of muscular work that patients with this atrophy have been doing This may possibly throw light on the causes of spinal muscular atrophy

92 **Roentgen Examination of the Motor Functioning of the Stomach** —Kjørstad has been investigating the relations between "Roentgen retention" in the stomach and clinical retention in ten healthy medical students and in 100 patients The stomach was entirely or practically empty in the students by the end of the fifth hour In 9 per cent of the patients there was more or less Roentgen but no clinical retention, and in 17 per cent there was clinical but no Roentgen retention *In the other 74 per cent, retention was evident with* both the test meal and the contrast meal This comparatively frequent lack of parallelism in certain cases between the evacuation of the contrast meal and the ordinary test meal is suggestive

Ugeskrift for Læger, Copenhagen

April 26 LXXIX No 17 pp 647-684

97 Clinical and Roentgenologic Study of Chronic Habitual Constipation IV T E H Thaysen —p 647 To be continued
98 *Quantitative Determination of Albumin in the Urine G Andresen —p 660

98 **Test for Albumin in the Urine** —Andresen here relates comparative tests with his technic for albumin in the urine A round, not pointed, albuminometer must be used The urine and the Esbach reagent are placed in it as usual and then 0 1 or 0 2 gm of barium sulphate (tungspat) is added and after mixing the glass is set aside for precipitation In four minutes it is complete The amount of barium sulphate is immaterial If the urine contains over 2 per thousand albumin it should be diluted before applying the test The tabulated details show close concordance between the findings with this test and the Kjeldahl, especially with urine from nephritics

The Journal of the
American Medical Association

Published Under the Auspices of the Board of Trustees

Vol LXVIII, No 26 Chicago, Illinois June 30, 1917

THE HOSPITAL OPPORTUNITIES AND RESPONSIBILITIES TO THE SYPHILITIC *

HENRY ROCKWELL VARNEY, M D
DETROIT

In contrasting the hospital attitude of today with that of twenty-five or even ten years past, we are gratified to note the broadening attitude now extended the syphilitic everywhere It has been only a short time since a known syphilitic was barred from hospital care and sent to the outpatient department for treatment which he received for symptoms only, and was then lost, the staff assuming no responsibility for further treatment or for the safety of the uninfected Today, still increasing numbers of general hospitals not only admit to their special wards patients with all stages of syphilis for treatment and control, but are administering a far greater service in educating not only the syphilitic, but also the interns and nurses who administer to his care and treatment A growing responsibility, then, confronts every general hospital toward the syphilitic, and on our shoulders rests the mission of driving home this responsibility The teaching hospital which welcomes to its wards and its medical service the syphilitic is embracing the most gigantic opportunity in preventing and treating the most prevalent chronic disease in all communities

In a recent survey of the Class A hospitals of this country, it was found that an overwhelming majority were closing their wards to all physicians not members of their staff The advantages of such an action as this were considered a distinct advancement over the open wards, and in no instance was there any intention of returning to the old open hospital methods

The hospital management which marks the success of the leading hospitals in this country is the management which advocates the closed or restricted medical service The most successful hospital service for the syphilitic is the restricted general hospital with closed free wards and closed outpatient service The advantage of this type of hospitalization is obvious

More and more the hospital is becoming the center for scientific medical investigation and teaching The inability of the medical man, as well as the surgeon, to conduct a complete medical examination in his office is now becoming more generally recognized Grouping of medical specialists in a closed teaching hospital is without question a distinct advance in medical study and teaching General hospitals with closed wards conduct closed outpatient clinics, and the treatment of all syphilis in all departments of the hospital should be under one department of syphilis and controlled by social service The special service for the syphilitic must be equipped with the most modern laboratory facilities not only for determining an early diagnosis, but also to assist in the periodic treatment and teaching

The medical service should be continuous and the responsibilities definitely placed on the chief of the service, with a selected corps of assistants The service should first teach the intern staff of physicians who enter this department by selection, and few there are who are adapted to this work They should be taught that no patient needs more human consideration from them than the suffering syphilitic, and there is no more appreciative class of patients and no more gratifying reward awaits them than that which is constantly coming from this unfortunate class when conscientiously treated The true professional ministrations of the syphilographer in his daily rounds toward the syphilitic convey the most impressive teaching to the intern The social service corps of nurses should also receive special instructions, so as to carry helpful knowledge and assistance to the syphilitic home rather than knowledge that is discouraging and detrimental A course of special lectures and round table discussions with the social service staff of nurses is most helpful and advisable

All syphilitics who enter the restricted wards or outpatient departments are recorded as syphilitics by the social service This registration is made without objection on the part of the patient, because hospital records are considered private Here, then, in the hospitalization of syphilitics we possess, next to the army and navy, the most accurate available records gathered in an unobjectionable manner This registration will be of unequaled value in having on record the syphilitics of a community The greatest difficulty in the hospital treatment of syphilis in the past was due to the inability of the hospital service to follow up and periodically treat the syphilitic Here then, through the follow-up records of the social service department and clinics in which social service has been installed, we have the necessary data Not only has attendance been enormously increased, but also the patient is voluntarily recorded and periodically notified when to return for further observation, laboratory checks and treatment With this valuable service we are treating not only the symptoms of the disease but the disease itself and are preventing its transmission When a syphilitic is registered under the social service department and that patient is a member of a family, we not only treat the one who presents himself, but we go into the family and determine the extent of the syphilis, and often the whole family is

---

* Chairman's address read before the Section on Dermatology at the Sixty Eighth Annual Session of the American Medical Association New York June 1917

found syphilitic No hospital service can successfully treat syphilis without a well organized social service department

Under this closed system these patients do not lose days of valuable hospital service because of inattention which comes through the shifting of responsibility The syphilitics of a general hospital should all be in one department under the supervision of a group of specially trained men This service should be wholly responsible for the absolute control and treatment of the syphilitics of that institution When complications arise and the counsel of other specialists is necessary, cooperation is most essential These specialists should examine and report to the head of the department recommendations for special treatment without any transfer to another department The syphilitic cared for under such a system places confidence, first, in the syphilographer, and second, in the institution and its social service system of control A small percentage of registered active syphilitics does not respond to periodic notification for return to the hospital for treatment This irresponsible class should be compelled to return by an order from the probate judge until it is considered uninfectious

In no other disease is it more important that the confidence of the syphilitic in his physician be most firmly established Rotation of service or the transferring to other services destroys this confidence, and its loss is most damaging and detrimental to the control of this class of hospital patients This confidence must be maintained and continuously carried over weeks, months and years of observation It is a fact that the syphilitic wanders from clinic to clinic and shops from physician to physician principally because of a lack of interest of the staff physician

It is estimated that from 15 to 25 per cent of patients admitted to all departments of the general hospitals are syphilitic This percentage is based on routine Wassermann tests and clinical symptoms of several hundred patients, and to this number could be added a certain small percentage of syphilitics who do not show positive serologic findings or even clinical symptoms, but show a positive spinal fluid finding With this percentage of syphilitics in our general hospitals, how absolutely absurd is the action of any hospital board in rejecting known syphilitics This has been the status of syphilitics in our general hospitals for many years Yet the percentage that has been recognized and received treatment during hospitalization has been appallingly small This scientific proof of their existence in the hospital is most positive, and the remedy for the correction of the present existing situation is equally positive Recommendations for routine serologic examinations, and also spinal fluid, in doubtful cases, is as necessary as any routine standing order for examination of patients admitted to the hospital Routine urine analysis for the possible existence of albumin or sugar is a standard order for all hospital patients, yet how comparatively seldom is this pathologic condition found, and how even more important is the knowledge of the existence of a positive Wassermann test With such routine recommendations, much unnecessary suffering and hospital expense would be spared Recognition, then, of this class of unrecognized syphilitics means prompt and appropriate treatment, a shortening of the days spent in the hospital, and the restoring of a large percentage of this class to their self-supporting vocations

Syphilis is not only a grave disease, but also a most expensive one, both to the patient and to the community and state The early recognition and treatment of syphilis is far less expensive to the community and the state than the unrecognized, insufficient treatment of the patient If we are to check the constant enlarging of our public institutions to accommodate the increasing number of hopeless inmates, we must thoroughly acquaint the voter and the legislature with the great importance of appropriations for carrying on a more extensive preventive campaign in the hospitalization, treatment and control of syphilis They should further be cognizant of the percentage of inmates and public charges who are now confined in our state institutions, the cause being directly traceable to syphilis, both inherited and acquired State appropriations should be most liberal and unlimited, now that we can scientifically prove that early recognition and treatment can greatly diminish the number of hopeless public charges and maintain many syphilitics as self-supporting citizens

Medical history records that following all recent wars there has been a wide dissemination of syphilis, yet in no previous national conflict have the soldier and the sailor been so surrounded with scientific protection All credit is given to the medical army and navy service for this protection Even with every possible knowledge of the form of transmission, as well as the medical protection given, there will be much syphilis returning to our country following this international conflict The infection acquired will be that transmitted from one nationality to another, and according to bacteriologic laws, strains of any organism placed in new fields, transmitted from one race to another, usually present the most virulent type of the disease This class will consist of registered syphilitics who will be returned to the community in which they reside to be further treated in the general hospital This is a most important approaching situation, and we should be aroused to this responsibility and to the stirring need for more hospitals and dispensaries equipped with the most modern facilities to meet this approaching medical problem

Now that we possess and have at our command the knowledge of the etiology, methods of early diagnosis and specific treatment of this disease, we should strongly advocate the installing of a more uniform systematic method of medical service in our general hospitals for the control and treatment of the syphilitic

---

Poisoning from Rhubarb Leaves—The sudden death of a person (*Pharm Jour*, May 12, p 413) alleged to be due to the deceased having partaken somewhat freely of cooked rhubarb leaves is reported from Enfield, England The symptoms corresponded to those usual in cases of poisoning by oxalic acid Owing to the scarcity of vegetables newspapers recommended rhubarb leaves as a substitute for cabbage The public health officer of Enfield has issued a warning against such substitution The editor of the *Pharmaceutical Journal* calls attention to the account of another death in 1901 from eating stewed rhubarb leaves In this country the leaves are not commonly used as food but the leaf stalks are consumed to a considerable extent in the form of sauces and pies The leaves and leaf stalks of rhubarb contain citric, malic and oxalic acids, chiefly as the calcium, magnesium and potassium salts Of these, oxalic acid is the only one having distinctly poisonous properties Cases of poisoning from eating stewed rhubarb leaf stalks are rare, probably because the amount of oxalic acid thus ingested at a single meal is small

ETIOLOGIC DIAGNOSIS OF CHRONIC NEPHRITIS AND HYPERTENSIVE VASCULAR DEGENERATION*

ARTHUR R. ELLIOTT, M.D.
CHICAGO

The etiology of acute nephritis is no longer open to argument. General agreement exists that except in those rare instances of nephritis produced by chemical irritants, such as mercuric chlorid, the invariable cause of acute inflammation of the kidneys is bacterial invasion from some primary source or focus situated elsewhere. The pathogenic organism in the overwhelming majority of cases is the streptococcus. The etiology is usually apparent in a comparatively recent tonsillitis, rheumatism or other form of streptococcus infection with or without endocarditis. In both acute and subacute cases, streptococci may often be found in the urine.

Ophuls insists that there exists no sharp line of division in anatomic features between acute, subacute and chronic nephritis. They appear to be different grades of the same pathologic process. By inference and analogy we might expect chronic nephritis to possess the same etiology as more recent and acute forms of the disease, but the information proving this is usually hard to come by, owing chiefly to the difficulty of securing a satisfactory clinical history. The period elapsing between the original infection and the date of investigation in chronic cases often interferes with any accurate coupling up of cause and effect. Search for the time and character of the original infection is prejudiced on the one hand by failure of memory or indifference to important details of health on the part of the patient, and on the other hand by the fact that the persisting infective focus which perpetuates the nephritis may be so obscure and insignificant as to baffle investigation for its discovery.

A very real problem in working out the etiology of these chronic cases is the difficulty of evaluating the various infective incidents in the history of any given case. For example, one patient of the series presently to be summarized gave a history of a severe wound infection with septicemia fifteen years, arthritis six years and gonorrhea five years before coming under observation, and at the time of examination the patient had an unusually extensive pyorrhea alveolaris. Another patient had suffered repeated attacks of tonsillitis, had had polyarthritis, gave a double plus Wassermann reaction, and had exceptionally severe dental sepsis. Such difficulties discount any attempt to be exact or dogmatic in drawing conclusions. The etiology is perhaps sufficiently obvious when it is possible to demonstrate a chronic septic tonsillitis, sinus infection or pyuria, or if the patient has chronic endocarditis, but lacking some such definite finding, there remains merely reasonable conjecture as a resort. Even from the pathologic side there exists no distinctive morphologic picture by which the antecedent infection in any given case can be identified.

One other point that has to be determined is the influence exerted by syphilis in the etiology of nephritis. Should the existence of a positive Wassermann reaction be accepted as proof that the lesions in the kidneys are of syphilitic origin even to the exclusion of other existing etiologic factors which ordinarily would be considered operative? This question is hard to answer. Unmistakable syphilitic lesions, such as gummas, are rare in the kidneys. Acute and subacute forms of nephritis have been observed to occur in early acquired syphilis and have been attributed to that disease. Hoffmann found living spirochetes in the sediment of the last portion of the urine in one of his cases. The observation, so far as I am aware, has not been confirmed, and Hoffmann acknowledges that the organisms may have come from lesions within the urethral canal, since the specimen was not catheter drawn.

The status of syphilis in the etiology of chronic nephritis is uncertain. Ophuls frankly states that he does not believe that proof has yet been furnished that spirochetes can produce lesions in the kidney similar to those observed in ordinary bacterial infections. Thus far, there has been no success in the attempts to demonstrate spirochetes in the renal tissues in chronic nephritis. In striking contrast to the acknowledged important role played by syphilis in the production of circulatory disease, there has been little success in attributing to it an important direct influence in the etiology of nephritis. Possibly future studies may clear this point. There is a strong temptation to accept offhand the existence even of latent syphilis as sufficient etiology in any case of chronic nephritis. It seems to me that this is a temptation to which we ought not to yield too readily. Since the proof of the etiology of certain cases must be indirect, syphilis may serve as well as any other assumption, still if reasonably certain evidence of a chronic bacterial infection exists in any given case, the burden of proof is in favor of that element rather than of syphilis. Even in the vascular type of cases, known as hypertensive cardiorenal disease, the etiologic value of syphilis, while much more reasonable, owing to the sclerotic nature of the lesions, fails on examination of the material to appear of great magnitude.

CAUSES OF NEPHRITIS

Condition	Number
Tonsillitis	9
Pelvirectal abscess	1
Puerperal nephritis	1
Pyelitis	1
Furunculosis	1
Scarlet fever	1
Chronic sinus infection	1
Chronic endocarditis	3
Pleurisy	1
Pneumonia	3
Malaria	1
Bronchitis	1
Infected sores of foot	1
Wound infection with septicemia	1
Dental sepsis	4
Syphilis with alcoholism	1
Syphilis	3
Unknown	6

CAUSATION OF CHRONIC NEPHRITIS

As possibly throwing some light on the foregoing problems, I would submit a brief analytic summary of the etiology of forty cases of chronic diffuse nephritis taken from private records and the medical service of St. Luke's Hospital during the past two years. Of the forty cases, fourteen were in women and twenty-six in men. The average age was 38 years. Edema of the renal type was present in eighteen cases, severe uremia existed in eleven cases, and death from uremia occurred in seven cases while under observation. Retinitis albuminuria was present in five instances. The kidney function was studied by the phenolsulphonephthalein test in thirty-one cases, the average function index being 30 per cent. in two hours. The blood

---

* From the Medical Service of St. Luke's Hospital.

Wassermann test was made on thirty patients, and was found to be positive in seven and negative in twenty-three

A study of the histories and careful search for foci of infection furnished data sufficient to enable us to hazard the accompanying etiologic tabulation. In every patient included in the tonsillitis group, infection could be demonstrated in the tonsils One patient had had repeated tonsil infection, once with polyarthritis One developed albuminuria following tonsillitis four years before coming under observation, and had become dropsical following a recent sinus infection Another patient of the group showed albumin in the urine after tonsillitis three years before entering the hospital, and in the interim had experienced several tonsil infections Four other patients testified to the occurrence of repeated tonsil infections, one having also had herpes zoster In two other patients no definite throat history existed, but the laryngologist condemned the tonsils as chronically infected The case ascribed to pelvirectal abscess was of a physician whose albuminuria was first noted during that infection, his nephritis persisting and developing up to the time of his death from uremia some years later Puerperal nephritis is not a frequent starting point for chronic diffuse nephritis, but in the case here included the albumin had never disappeared from the urine and the case now constitutes a typical instance of chronic nephritis One case each is ascribed to furunculosis, pyelitis and scarlet fever There can be no doubt regarding the etiology of these cases, the nephritis developing in each instance as a direct sequel to these infections, while the patients were under close observation One of the cases ascribed to chronic endocarditis recently came to necropsy, death being from uremia Extensive vegetative endocarditis existed and the kidneys showed extensive disseminated foci of glomerular nephritis such as is common in ulcerative endocarditis The patient whose nephritis is attributed to sinus infection had had a persistent sinusitis for many years with repeated acute exacerbations Radical treatment of the infection greatly improved the nephritis The preceding eighteen cases, regarding which the etiology is given somewhat in detail, have a reasonably direct etiologic connection with some streptococcus infection The remainder of the series must be handled with much less certainty The causes as ascribed, pleurisy, pneumonia, bronchitis, wound infection, malaria, etc, constitute a mere setting down of the most prominent infective incident in the patient's history that bears a reasonable time relationship to the discovery of the nephritis

Two items of interest which claim attention are the significance of dental sepsis as observed in the foregoing series and the etiologic relationship of syphilis in those cases showing positive Wassermann reactions

Dental sepsis of a mild grade, such as moderate signs of pyorrhea caries and single alveolar infections, was, as might be expected, not infrequent in this group of invalids, and probably was no more directly connected with the systemic disease than in any other group of equally sick persons In ten of the cases the condition is noted as extreme, either in the form of pyorrhea, multiple root abscesses, extensive caries or some combination of the three Rightly or wrongly, it appears to me that the influence of this factor is discounted in all but four cases by the existence of some other etiologic factor of more established importance, such as tonsillitis or syphilis In only four cases did dental sepsis constitute the only infection bearing possible direct connection with the nephritis

Seven out of thirty cases tested in the foregoing series reacted positively to the Wassermann test In only three of these cases does it seem possible to ascribe direct importance to this factor in the production of the nephritis Of the other four cases, one patient developed nephritis after scarlet fever, another had chronically infected tonsils, the third developed edema three months after a severe grip infection with bronchitis, and the fourth is the fatal case of nephritis with endocarditis already referred to

This group of forty cases of chronic nephritis is not large, and consequently no sweeping deductions would be warranted The etiologic classification which is suggested is probably not sufficiently accurate to be even a close approximation of the truth, and yet a glance at the facts presented renews the impression, forcibly created by all similar studies, that true *chronic nephritis is a secondary or subdisease produced by bacterial infection* The infective agent is usually, although not necessarily, the streptococcus The fact that the search for the proper cause is often disappointing and many times futile need create no surprise The original cause may have been tonsillitis If the tonsils still harbor infection, their removal may favorably influence the course of the kidney disease, but not necessarily so, because there may exist elsewhere, perhaps beyond search to discover, a secondary infective focus which suffices to perpetuate the renal inflammation On the other hand, the original focus of infection, be it in the tonsils, sinuses or elsewhere, may have long since disappeared, and yet an infected gland, septic focus in the spleen or some similar bacterial localization may exist to the continuous detriment of the kidneys Etiologic therapy — the only curative therapy we may avail ourselves of in this disease — imposes the duty of painstaking search for and discovery of all foci of infection of whatsoever nature, and their radical removal whenever possible

CAUSATION OF HYPERTENSIVE CARDIOVASCULAR-RENAL DISEASE

A subject of equal interest and of greater obscurity than the etiology of chronic nephritis is the proximal cause or causes of hypertensive cardiovascular-renal disease, or what has been familiarly and I believe wrongly designated "chronic interstitial nephritis"

I shall briefly review a series of these cases chiefly for the purpose of developing such information as they may yield regarding the apparent influence of syphilis and mouth and throat infections This series includes sixty-eight cases carefully observed during the past two years All of them were private patients with the exception of three taken from the medical service of St Luke's Hospital Thirty-one were women, thirty-seven men, and their average age was 50 years

Careful note of the condition of the teeth was made in fifty-seven patients It is to be remembered that the patients being observed in private practice were mainly from the well to do classes and that consequently the average care of the teeth and the mouth hygiene were unusually good No unusual or significant dental sepsis was observed in thirty-eight of the fifty-seven patients examined In nineteen, definite oral sepsis existed either as extensive pyorrhea, or alveolar or tooth root infections, principally the former. Whether the 33 per cent. of dental sepsis in this group is significantly in excess of what might be expected in an equal number of unhealthy persons beyond middle life, I am unable to state, but am inclined to believe that it is not.

The condition of the tonsil was noted by careful direct examination and at times culture in forty-eight patients. So far as could be determined by the methods of examination, the tonsils were apparently not the seat of infection in forty-three instances. In five others, positive evidence of chronic infection was secured. The percentage is not high enough to possess great etiologic significance.

The most surprising outcome of the investigation of this series of cases was the result of Wassermann study. The blood Wassermann test was made in thirty-three patients; thirty-two of these gave negative reactions, and but one reacted positively. I confess that I was prepared for a rather different result from the one obtained. The ability of syphilis to produce vascular disease, which is one of its most fixed characteristics, and the increasing importance ascribed to it in the etiology of circulatory disease generally, might reasonably lead one to look for a more important rôle in high blood pressure disease than the results in this series would indicate. I may add as a personal note that since Schottmuller's report of a positive Wassermann reaction in over 40 per cent. of his cardiac cases taken as a whole, irrespective of the lesion, came to my attention, I have made the Wassermann test a routine part of the examination of every patient coming under my observation with circulatory disease and my experience to date would lead me to believe that in place of syphilis being of such high incidence as claimed by Schottmüller, it is relatively uncommon. The reason for this wide divergence probably lies in the difference of material studied in this country.

30 North Michigan Avenue.

SHOULD THE COLON BE SACRIFICED OR MAY IT BE REFORMED?

J. H. KELLOGG, M.D.
BATTLE CREEK, MICH.

About fifteen years ago, when spending a few weeks in Paris, I learned that Metchnikoff of the Pasteur Institute had announced the discovery that the colon was a useless appendage, a vestige of a primitive state which evolutionary processes had unfortunately failed to eliminate; that the colon bacillus was the germ of old age; that, in general, long lived animals had short colons, and animals with long colons, short lives.

About the same time Mr. Lane began advocating the operation of short circuiting and colectomy. I had an opportunity to witness his operative work and to admire his admirable technic and his genial courtesy. I saw a number of the patients on whom colectomy or short circuiting had been performed. In general, the patients seemed to be greatly benefited, although most of them had been operated on quite recently.

The contention of Metchnikoff that the colon is an objectionable organ which we might do better without because of the absorption of noxious products from the putrefying materials which it harbors, and Mr. Lane's contention that the most effective method of getting rid of colon germs and poisons would be the removal of the colon itself, seemed plausible. Having spent most of my lifetime in the study of dietetics, however, especially from the standpoint of physiology and biology, the question naturally arose in my mind whether the real cause of the objectionable influence of the colon was to be found in the neglect of Nature to remove a dangerous and useless portion of the anatomy which should have been left behind thousands of years ago in the upward climb of the race, or whether the real fault was to be found in the wrong use to which the colon has been put and the various abuses to which the organ has been subjected through neglect, ignorance and departures from biologic methods of living. The extensive character of the operation and the considerable degree of mortality which attended it led me to the conclusion that a more thoroughgoing trial of all other possible means, especially dietetic measures, should be made before resorting to so formidable a surgical procedure.

That both Metchnikoff and Lane were perfectly right in attributing to the absorption of putrefaction products from the colon a multitude of chronic ailments and morbid conditions is now pretty generally admitted, and these pioneers of medical progress are entitled to great credit for the able and courageous manner in which they defended their fundamental thesis against the bitter attacks of a multitude of ultraconservative and skeptical medical men, internists as well as surgeons.

The question which presented itself to my mind was this: Granted that the colon has "gone wrong" and has become a veritable Pandora's box of human ills, is it not possible that the offending member may be reformed, restored to biologic rectitude and thus cease to be a menace to the vital interests of the body? The thought in my mind was exactly that enunciated by the eminent English anatomist, Keith, in a discussion of the subject of alimentary toxemia by the Royal Society of Medicine, at several meetings during 1912. Said this ablest of living anatomists:

> We seem drawn to the conclusion that it is not the organization of the great intestine that has failed, but that our modern dietary sets a task for which it is not adapted. In civilized modern communities the great bowel has to manipulate a dietary such as was never before prescribed to it at any stage of its long evolutionary history. If an engine runs unsatisfactorily it may not be from a fault in its mechanism but from a defect in the fuel. Those who regard the great bowel as a useless structure blame the engine; for my part I stand by those who blame the fuel.

With this thought in mind I have labored constantly and earnestly during many years to devise and perfect methods for changing the intestinal flora, increasing peristaltic activity and overcoming stasis by removing mechanical obstacles to colon activity without resorting to operative measures having for their purpose either short circuiting or ablation of the colon. I have been much stimulated in my endeavors by the disappointing results of the operation advocated by Mr. Lane. Although cautious surgeons have been from the first slow to adopt these radical procedures, not a few surgeons, especially of the younger class, were apparently pleased to discover a new operative indication, especially when the new procedure was advocated by so eminent an authority as Sir William Arbuthnot Lane. It was not long, however, before the fact began to appear more and more distinctly that a large proportion of the patients who seemed at first to be bettered by the operation lapsed into conditions as bad as and in some cases even worse than those which existed before the operation was done It was inevitable that this should be the case The short circuiting operation did not remove the colon, and hence did not diminish the size of the reservoir in which putrefying fecal matters might accumulate, but converted the colon into a blind sac, thus rendering colonic stasis more certain and the clearance of the colon more difficult, besides, the ileocecal valve was left behind The lumen of the small intestine and that of the colon were made a single cavity with no barrier against a reflux of fecal matters from the blind end of the colon into the ileum whenever conditions might favor such a retrograde movement, such as overdistention of the colon through delayed evacuation This difficulty Mr Lane himself recognized, and sought to find a remedy in removal of the greater part of the colon, although the descending colon and often a portion of the transverse colon were still left behind

The reduction in the size of the colon did not, however, remove the difficulty to any considerable degree, for the lack of a barrier against reflux at the new ileocolic junction permitted the fecal matter accumulating in the shortened colon to back up into the small intestine with the greatest facility, causing distention and intense toxemia I witnessed an operation in one case of this sort by Mr Lane three years after the first operation had been done The second operation was made necessary by obstruction which developed at the sixth month of pregnancy The ileum had been stretched until it was nearly as large as the colon for a distance of several feet from the ileocolic junction The ultimate effect of this operation had been to add to the already overstretched colon an additional fecal reservoir so extensive that instead of 5 or 6 feet of colon the patient now possessed a fecal reservoir not less than 15 feet long

Systematic Roentgen-ray examinations made by Case have shown that reflux of fecal material after short circuiting and colectomy is not an exceptional circumstance but is the regular rule Case has examined about fifty cases at different intervals after one or the other of these operations had been performed, and has found the ileocolic junction incompetent in every one, in other words, neither the operation of short circuiting nor the operation of colectomy as performed by Lane permanently cures ileac stasis Both these operations, on the contrary, by making a common cavity of the ileum and the colon, create a condition from which ileac stasis must almost certainly result For a short time after the operation the tone of the small intestine may be sufficient in some cases to resist the reflux of fecal matters from the colon, but sooner or later, the small intestine becomes exhausted by the continual effort required of it, its lumen becomes increased, and several feet of ileum may be thus converted into a fecal reservoir, a purpose which it is poorly qualified to serve because of the active absorption which takes place from its villous surface

It is no wonder, then, that these patients not infrequently find themselves a few months after the operation in a condition more deplorable than that which at first existed I do not wish to be understood as maintaining that there are no conditions in which the operation of partial colectomy is indicated as a rational procedure In cases in which the proximal colon or terminal ileum is the seat of extensive malignant or tuberculous disease, and in some cases in which the proximal colon has been irreparably crippled by acute or chronic inflammatory processes, partial colectomy is certainly indicated, but in restoring the continuity of the intestine, the ileum should be joined close to the proximal end of the distal colon so that there shall be left no blind end in which feces may accumulate It is also essential that the new ileocolic junction shall be protected by constructing a check valve so that reflux of fecal matters and consequent ileac stasis may be prevented

I am confident, however, that cases in which colectomy is actually required are comparatively rare, provided the patient is given the benefit of rational nonsurgical treatment and, if necessary, supplemented by surgical procedures of a nonmutilating and far less drastic character The short circuiting operation is, in my opinion, not based on sound surgical principles, and involves disadvantages which forbid its use in any except rare and exceptional conditions

In my experience, nine out of ten, or even a larger proportion of patients suffering from severe stasis involving the large or small intestine, or both, may be made well and maintained in good health by the thoroughgoing and persevering application of measures of treatment which wholly exclude surgical procedures of any sort This statement is based on the successful treatment of several thousand cases of chronic intestinal stasis which had stubbornly resisted all ordinary measures of treatment A few weeks is usually sufficient to bring the patient to a state of improvement in which two or three natural evacuations occur daily, and to establish a regimen, by the following of which the patient may maintain his improvement indefinitely This, of course, must be accomplished without the use of laxative drugs and mainly by dietetic measures

In a few cases in which stasis is due to pronounced mechanical obstruction, comparatively slight surgical procedures will accomplish all that is necessary to render the dietetic and other measures above referred to effective In by far the majority of cases in which nonsurgical measures fail, the seat of difficulty will be found to be a prolapsed and adherent or incarcerated pelvic colon As pointed out by Case in numerous papers, adhesions may be readily shown when present by a Roentgen examination The operative measure required is a simple one It is only necessary to break up the adhesions by careful dissection and to prevent recurrence of the difficulty by attaching the pelvic colon to the omentum, which is in turn made fast to the abdominal wall at a point near the umbilicus By this procedure the pelvic colon is suspended by a swinging attachment which does not interfere in the slightest degree with the movements of the intestine and does not give rise to the pain from which patients usually suffer when the intestine is attached directly to the abdominal wall

Another operation which is occasionally but less frequently indicated is repair of the incompetent ileocecal valve This condition, however, is practically always secondary, and is rarely found except when associated with a prolapsed and adherent or incarcerated colon or a spastic condition of the distal colon The operation for repair of the ileocecal valve is a simple procedure and not accompanied by greater risk than the operation of appendectomy

Within the last ten years I have performed the operation of colectomy in twenty cases

The indications for the operation in the several cases were as follows

In seven cases cancer of the cecum or ascending colon with obstruction

In one case tuberculosis of the cecum and terminal ileum with obstructions

In one case, gangrenous colitis of the entire colon

In four cases extreme colonic stasis, the result of short circuiting operations previously done elsewhere

In seven cases intractable stasis due to so-called Jackson's membrane or adhesions

These twenty cases have been selected from more than 40,000 cases which have been treated in the Battle Creek Sanitarium clinic during the last ten years, or less than one in 2,000 Most of these patients have been found to be suffering from intestinal stasis, but they were relieved by nonsurgical means, or by simple restorative surgical procedures

The nonsurgical means which I have found most effective in relieving intestinal stasis are the following

1 A low protein, bulky diet consisting largely of fruits, fresh vegetables and whole grain preparations

2 The free use of bran or agar-agar, or a combination of both, at every meal From one half ounce to an ounce of cellulose daily seems to be necessary to stimulate the bowels to normal activity

3 The use at every meal of half an ounce to an ounce and a half of liquid petrolatum In some cases an emulsion of liquid petrolatum gives more satisfactory results, and the best results are often obtained from the use of petrolatum (which melts at the temperature of the body)

4 Abdominal massage and special exercises for developing the abdominal muscles

5 In very obstinate cases the patient takes, three or four times a day, a couple of tablespoonfuls of bran and as much fruit as he can eat Fresh and stewed tomatoes are found to be especially useful Lettuce and celery may also be used freely The patient is allowed to take fruit between meals or whenever he feels inclined to do so For persons suffering from hyperacidity, nonacid fruits, like bananas, pears, white cherries and melons, are used Occasionally it is found advantageous to make the diet consist wholly of green vegetables, raw and cooked, with bran or agar-agar This regimen will usually clean off the tongue and get the bowels moving three or four times a day within four or five days Occasionally the regimen must be continued for a week or ten days When mechanical obstacles to bowel action, such as prolapse of the pelvic colon and adhesions or other obstructive lesions, are *not* present, this method will very rarely fail

6 At first it is occasionally necessary to use an enema at 80 F once a day The patient should be required to go to stool on rising in the morning and after each meal

7 In cases of colitis with a spastic condition of the descending and pelvic colon, the colon is treated by means of hot saline enemas, and afterward there is introduced into the colon, with the patient in the knee-chest position, several ounces of a liquid culture of *Bacillus bulgaricus* and *Bacillus bifidus*, to which is added a small amount of malt sugar and boiled starch, the purpose being to change the character of the bacteria growing in the colon and thus encourage the healing of the infected mucous surface

8 In cases in which the lower colon has lost its normal sensibility, various stimulating applications are made, among the most useful of which the electricity applied to the upper part of the rectum or pelvic colon by a bipole electrode, very weak solution of hydrogen peroxid (0 25 per cent), solution of citric acid (from 0 25 to 0 5 per cent), and a mixture of equal parts of carbon dioxid and pure oxygen gas (from 200 to 500 cm)

9 In cases in which the mucous membrane is atrophied as the result of chronic proctitis, it is found very advantageous to introduce into the lower colon at night 3 or 4 ounces of a preparation of petrolatum which melts at the temperature of the body Such a preparation may be made by melting together equal parts of liquid petrolatum and paraffin

10 The wet girdle worn at night and a variety of other hydriatic procedures are also found highly useful in dealing with stubborn cases of constipation

Too much cannot be said in favor of bran and liquid petrolatum used in combination One supplies bulk, which is necessary to stimulate the sluggish colon, and the other furnishes lubrication which is required on account of loss of the normal mucus due to degeneration of the mucous membrane which results from chronic infection

The last ten years will be known in medical history as the colectomy era The introduction of the Roentgen ray has opened the way for exploration of the colon, as well as the stomach and other viscera The time has come to call a halt on colectomizing and short circuiting operations Many hundreds of stomachs and colons have been "fixed," "pleated," "suspended," "short circuited," "resected," etc, in many cases only because the Roentgen ray showed prolapse or "kinks," or "folds," or suspicious shadows of some sort Larger experience is making clear the danger of too much intermeddling with Nature's cunningly contrived and delicately constructed mechanism The Roentgen ray has demonstrated that prolapse of the stomach and colon are not indications for surgical intervention Lane's kink is definitely proved to be a consequence of intestinal stasis and not the cause of this condition The movable cecum is not a pathologic state but a condition essential to the physiologic functioning of the colon

Except in cases in which actual and severe mechanical obstruction exists, surgery is not indicated By the liberal use of bran and liquid petrolatum in conjunction, not in succession, and the skilful use of a "fruit regimen" followed by a properly regulated low protein dietary, practically all cases of intestinal stasis may be cured, excepting only the rare cases in which Roentgen examination shows actual mechanical hindrance

I am convinced that the sober second thought of experienced surgeons, by which the value of every new surgical procedure must sooner of later be determined, will demand such modifications of the Lane operations, short circuiting and colectomy, as will relieve them of their most objectionable features and will restrict the use of these surgical measures to extremely rare and exceptional cases

---

Untrained Health Officers—Here is a place where the trained officer shows his value An untrained man cannot initiate, cannot lead He will follow and copy He is likely to be forced by well-meaning people outside the department to give undue prominence to things not at all of first importance—to "swat-the-fly" campaigns, fights on food adulteration and white-washing dairy barns, instead of attending to such unexciting features as birth registration, sewage disposal and a pure water supply—Alice Hamilton, *Survey*, Jan 20, 1917

THE HYPODERMIC USE OF CHAULMOOGRA OIL IN LEPROSY

PRELIMINARY REPORT OF SERIES A

NATHANIEL BERCOVITZ, B.S., M.D.
HOI HOW, HAINAN, CHINA

Of the remedies used in the treatment of leprosy, chaulmoogra oil has given the most constant results. Its use by mouth, however, has been very difficult, since it induces such nausea that patients cannot bear prolonged treatment by that method. Those patients who can take the oil over a long period of time have invariably shown some improvement.

In 1914 Heiser[1] reported exceptionally good results in a series of cases treated at the Leper Colony at Culion, P. I., with hypodermic injections of a chaulmoogra oil formula. Camphorated olive oil and resorcin were added to the chaulmoogra oil. No bad effects on the patients thus treated were noted, the oil being absorbed into the system without even local irritation.

In May, 1916, this treatment was begun in a series of fourteen cases in a leper settlement outside the Hoi How city wall. Later seven more cases were added. These (Series B) will be reported in a later communication.

The conditions for treatment were far from ideal. The patients were all in advanced stages of the disease: six of the cases were of the anesthetic type, and eight were of the mixed anesthetic and tubercular type of leprosy. The average duration of the disease in these patients was eleven years, the most recent being of four years' duration. Five of the series gave a history of leprosy in the family. All belong to the lowest class of China, have always lived in filth, and have partaken of the usual Chinese food, including a liberal allowance of salt fish.

The formula given by Heiser was used: chaulmoogra oil, 60 c.c.; camphorated olive oil, 60 c.c., and resorcin, 4 gm. This mixture was sterilized and injected under the skin of the arms or legs. The injections were begun with 1 c.c. of the mixture, repeated at weekly intervals. After three weeks the dose was gradually raised until 3 c.c. were injected each week. After the first injection there was a slight reaction in all the patients. It began a few hours after the injection and lasted until the next day. In no case did the reaction exceed a slight headache with malaise and a suggestion of nausea. No reactions occurred after the first injection. Weekly injections have been given for nine months.

There was no local reaction at the site of the injection. The mixture was easily absorbed. In one case there was a local infection which, however, healed promptly. No injections were made directly into the lesions. In addition to the weekly injections the patients have been given sodium bicarbonate baths three times a week. They have also to take a compound iron and arsenic pill in alternate weeks. Cathartics have been administered when indicated.

Within four weeks after the injections were commenced, all the patients asserted that they felt more comfortable. The malaise and lack of energy which accompanies the disease had to a large extent decreased. The appetite was increased and the general condition of all was markedly improved.

In the anesthetic type of cases before treatment there were found the usual areas of anesthesia, with trophic changes in the extremities, and contractions of the joints of the hands and fingers, with loss of fingers and toes. In these cases for the first six or seven months of the treatment the only changes noticed were constitutional, increase in weight and strength, and slightly increased motion in the contracted joints. After that time, however, in three of the six cases of this type (Cases 3, 7 and 8), the patients began to complain of pains in the legs, at first in the nature of shooting pains, and later more constant in character. In one of these cases (Case 7), there had been a slight return of tactile sensation. In one case (Case 13) there were ulcers on the stumps of both hands, all ten fingers being gone, and over the anterior tibial surface of the right leg. These ulcers have all healed over with the formation of clean scar tissue.

In these cases, therefore, clinical improvement has been noted, with the return of pain sensation in three of the six cases, and with return of tactile sensation in one.

In the mixed type of cases there were tubercular deposits in the skin of the face, ears, arms and chest, with anesthesia of the hands and feet. Some of these patients had extensive ulcers, with more or less trophic changes, and loss of fingers and toes. Most of these patients have shown marked improvement as a result of the treatment.

At first all showed more or less improvement of the general condition with gain in weight and strength. After an interval from the time of commencement of treatment varying from six weeks (Case 4) to eight months (Case 12) six of the eight cases of this type began to show change in the tubercles. These have been more or less absorbed, in some cases the whole expression of the face being changed.

Shortly after the tubercles began to disappear, these patients began to complain of severe pain in the feet and legs. In some cases this pain was so intense that the patients were unable to stand on their feet. Large ulcers which had previously been absolutely insensitive now were exquisitely tender. This condition kept up for several weeks, after which the pain gradually subsided. As the pain went away the ulcers healed over, and the patients report that the sense of touch has returned. This seems to be especially true in Cases 4 and 11, in which the most marked improvement has been shown.

The patients with both the anesthetic and mixed type who have experienced the sense of pain in the feet and legs have invariably shown a change of color of the skin of the affected areas from the dusky shade suggestive of stasis to a reddish flesh color suggestive of improved circulation. If the anesthesia and trophic changes which accompany the disease are considered the result of pressure on the nerves and blood vessels caused by the leprous deposits, the intense hyperesthesia and improved circulation can be explained on the grounds of absorption of these deposits, and the release of pressure.

Nodules were excised in three of the cases of the mixed type. In Case 4, sections showed a degeneration of the epithelioid cells of the lepra nodule with deposits of fibrous connective tissue within the nodule. This man has shown the most marked improvement of the entire series. In Case 6, sections showed no change in the lepra nodule, and bacilli were very abundant This patient has shown little change to date except for the pain in her legs In Case 9, sections showed some degeneration of the epithelioid cells of the nodule with some deposit of fibrous connective tissue within the nodule Bacilli are present This patient has shown marked improvement of the contour of the face

---

[1] Heiser, V. G.: Supplement 20, Pub. Health Rep., October, 1911.

The changes, therefore, seem to be destruction of the epithelioid cells of the lepra nodule with deposit of fibrous connective tissue, a process of fibrosis similar to that which takes place in healing in tuberculosis Further study of this phase of the subject will be reported later

CONCLUSIONS

1 The chaulmoogra oil formula used by Heiser is effective in the treatment of leprosy

2 The hypodermic use of this formula is a satisfactory method of administering the drug

3 The tubercular forms of leprosy respond to the treatment earlier than the anesthetic forms

4 Anesthetic areas in both types of the disease have become hypersensitive with improvement, and some of the patients report the return of tactile sensation

5 Under this treatment large ulcers have healed with the formation of clean, white scar tissue

6 Sections from two cases showing marked clinical improvement have shown fibrosis of the lepra nodule, sections from one case with very slight clinical improvement showed a typical leproma

American Presbyterian Hospital

OIL OF CHENOPODIUM AND CHLOROFORM AS ANTHELMINTICS

PRELIMINARY NOTE *

MAURICE C. HALL
Parasitologist Research Laboratory Parke Davis & Co
DETROIT

AND

WINTHROP D FOSTER
WASHINGTON, D C

In view of the fact that numerous experiments, which are given in detail in a paper now ready for publication, have apparently established some general facts of interest to the medical profession in regard to oil of chenopodium and chloroform as anthelmintics, we wish to anticipate the appearance of that paper by presenting some of the more important conclusions

Briefly, the essential facts of interest in connection with these drugs are as follows Oil of chenopodium has a very high coefficient of efficacy against ascarids, and among the drugs which we tried we found it more effective in a single therapeutic dose against these worms than any other drug Furthermore, its efficacy against ascarids proved greater than that of any other drug against various other parasitic worms with which we experimented It should be given with castor oil and followed with castor oil, the drug being administered on an empty stomach, in order to secure the best results and to give the patient the maximum amount of protection from the local and systemic effects of the drug Chloroform, however, has a higher coefficient of efficacy against hookworms than oil of chenopodium or any other drug with which we experimented It can be given internally in castor oil in therapeutic doses with a degree of safety that compares favorably with that of the classic, and, according to our experiments, less effective remedies

We have carried out a number of experiments with dogs, and we believe that the conclusions which we have drawn from them may be applied rather closely to man, as the digestive tract, the parasites, the dosage for most drugs and the general reactions to drugs are much alike for both animals

In our experiments on dogs, the animals were given anthelmintic treatment, the feces collected and examined carefully for worms passed from then on until the animal's death, and the animal finally killed, and the entire digestive tract examined for worms The animal was usually killed on the fourth day The percentage of efficacy was computed on the relation of the number of worms passed to the total number present when treatment was instituted, this total being the sum of the number passed after treatment and the number found postmortem

The first point which we have noted as of interest, namely, that oil of chenopodium in a single therapeutic dose is more effective against ascarids than is any other drug with which we experimented as a remedy for ascarids or any other worms, needs but little discussion We have compared it with santonin, thymol, turpentine, areca nut, tartar emetic, ether, chloroform coal tar phenols spigelia, a number of common purgatives which have been said to have anthelmintic properties, and two samples of the latex of *Ficus laurifolia*—one of which, however, did not accord with the description of this substance—and have found that oil of chenopodium properly administered is a more effective and dependable remedy for ascarids than any of the others In fact, it comes close to being 100 per cent effective

An ideal anthelmintic should be 100 per cent effective against the worms it is intended to remove, and should exert no untoward action whatever on the host animal While oil of chenopodium may exert some untoward action on the host animal, we regard it as entirely safe when used in accordance with the second proposition of this paper This proposition is that oil of chenopodium should be given with castor oil and followed with castor oil, the patient being fasted to permit of the digestive tract being cleared of food that might mechanically, or otherwise, protect the worm from the anthelmintic We believe that it would also be advisable to precede the anthelmintic with castor oil

Although castor oil appears to be contraindicated with such anthelmintics as oleoresin of aspidium and thymol, it appears to be the best protection against ill effects from oil of chenopodium The systemic effects of chenopodium are not generally known We find it distinctly constipating, something which Motter[1] has noted, but which writers in general seem to have overlooked Salant and Livingston[2] find that chenopodium brings about a fall of blood pressure, the fall being of cardiac origin, diminishes the frequency of heart action, decreases the vagus irritability, and produces a depression in the amplitude and rate of respiration Salant and Mitchell[3] find that chenopodium produces a marked decrease of tone in isolated segments of intestine Salant and Livingston[4] find that chenopodium produces a marked depression on the isolated frog heart It would seem possible that it is this depressant action on the musculature of ascarids which results in the failure of these worms, which do not attach to the mucosa, to maintain themselves against the flow of the intestinal contents under the influence of peristalsis, and this in turn results in their expulsion from the body However, the depressant action on the intestinal musculature of the host results in constipation, in decreased peristalsis, and, as a sequel to that, in increased absorption, with local irritation and toxic systemic effects To offset this effect of the chenopodium on the host animal, active purgation is called for, and since the chenopodium exerts a constipating effect, the purgative may be given in large doses without serious purgation resulting An ounce of castor oil at the time the chenopodium was administered, followed in an interval of from half an hour to an hour by another ounce, would not be too much In case of poisoning by chenopodium, it is our opinion that large doses of castor oil would be the principal treatment indicated, epinephrin and digitalis being also indicated according to the findings of Salant and Livingston, but it is as a concomitant treatment that the castor oil is valuable in promoting peristalsis, slowing absorption, hastening elimination, and preventing poisoning It may be urged that time should be allowed for the anthelmintic to exert its effect on the worms before purgatives are administered Whatever may be true of that classical procedure as a general rule, the anthelmintic effect of chenopodium appears to be increased by the simultaneous administration of castor oil It may be urged that some persons do not tolerate castor oil well This is true, but it is our experience that castor oil gives the best results Its unpleasant taste may be disguised by saccharin, aromatic oils, orange juice, etc, or it may be given in soft capsules Methods of administration other than with castor oil may give good results with a reasonable amount of safety, this gives the maximum amount of efficacy and safety

---

* From the United States Bureau of Animal Industry

[1] Motter Pub Health Rep 1914 **29** 2651 2653

[2] Salant and Livingston Am Jour Physiol 1915 **38**, 67 92

[3] Salant and Mitchell Am Jour Physiol 1915 **39**, 37 53

[4] Salant and Livingston Am. Jour Physiol. 1916 **41**, 21 38

The present commonly accepted method of administering oil of chenopodium for hookworm disease is to give it in three 5 to 15 drop doses at intervals of one or two hours or even of twenty-four hours, the last dose being followed by castor oil after an interval of one or two hours We regard it as inadvisable to allow oil of chenopodium to lie in the digestive tract for hours or to permit hours or days to elapse before administering castor oil In the dose given, the chenopodium is probably absorbed, entirely or nearly so, within a few hours, by the unprotected mucosa, and the purgative which may remove worms is too late to remove any of the anthelmintic and aid in protecting the host by its removal We cannot say whether the best results would be obtained in the treatment of hookworm disease by giving divided doses as noted above or by giving an entire dose of 15 to 45 minims at a time, but for the safety of the patient we believe the doses, large or small, should be accompanied by castor oil Of course, the divided doses aid in protecting the patient by permitting the development of symptoms of idiosyncratic intolerance, or other trouble, and the consequent cessation of anthelmintic treatment

In our experience, chloroform was decidedly superior to thymol or oil of chenopodium as an anthelmintic against hookworms Schultz[5] found that chloroform was very effective against hookworms in the dog He says of it "It has proved rapid in its action, and thus far not followed by any evil aftereffects Should the chloroform-castor oil mixture act as favorably in human beings as it has for me in dogs, it will prove a universal worm remedy of great importance" However, Schultz was afraid of the irremediable injuries following overdoses of this drug and therefore favored the use of the less effective drug, thymol His experimental results favoring chloroform made little impression in this country, and the enthusiastic advocacy of chloroform as an anthelmintic comes from an Italian, Alessandrini[6] Alessandrini states of chloroform that it has these advantages Combined with castor oil, it requires no special preparation of the patient, it can be administered at a single dose, it does not cause local or general disturbances either immediately or subsequently, and it is perfectly well tolerated and not nauseous Alessandrini advocates the use of from 3 to 4 gm doses, dissolved in olive or castor oil, and states that it is thoroughly efficacious against hookworms, whipworms, pinworms and ascarids We can confirm its efficacy against hookworms, we found it much less effective against ascarids than is chenopodium and not especially effective against whipworms, we have not tested it on pinworms, but we believe that it would be less effective than some other anthelmintics It may be that its efficacy against hookworms is due to the fact that hookworms are bloodsuckers and that the chloroform rapidly absorbed by the blood is ingested by the hookworms in amounts sufficient to produce anesthesia or lethal toxic effects Various writers have advocated the use of chloroform in castor oil in connection with oil of chenopodium or other anthelmintics, and some have claimed a synergistic action for chloroform and chenopodium We have not found any convincing evidence of synergistic action Chenopodium has a certain anthelmintic value for hookworms, and chloroform has a greater value, but we have not observed that the simultaneous use of the two drugs adds to the efficacy of the chloroform alone However, the combination of chenopodium and chloroform is a valuable one, as the chenopodium can be expected to remove ascarids when these are present in hookworm cases, and ascarids are commonly present in such cases

As regards our fourth proposition, that chloroform can be given internally in castor oil in therapeutic doses with a degree of safety which compares favorably with that of other anthelmintics, we can only say that our experiments show it to be true so far as dogs are concerned Almost all anthelmintics are poisons, intended to kill or stupefy or otherwise disable and remove worms, while at the same time inflicting a minimum amount of damage on the host animal by virtue of the comparative insolubility of the drugs or their rapid elimination Chloroform is one of the type which is rapidly eliminated While present in the body and in the course of elimination, it does more or less damage to the liver, and frequently to the kidneys and heart In the therapeutic dose, this damage to the kidneys and heart is usually slight, and that to the liver is completely repaired in the course of two or three weeks We doubt whether the permanent damage to the organism is greater than that resulting from the general surgical anesthesia of chloroform or the employment of the common anthelmintics

---

[5] Schultz, W H Remedies for Animal Parasites, The Journal A M A, Sept 30, pp 1102 1106

[6] Alessandrini Policlinico, Rome, 1915, 22, prat, pp 822 827

However, it is evident that in the interest of the patient's safety, an anthelmintic dose of 2 or 3 c.c. of chloroform should not be repeated within three weeks, and that certain lesions of the liver, kidneys and heart would be contraindications. It is also true of chloroform, as of other anthelmintics, that patients with massive infestations who are in very poor physical condition and whose vitality is much lowered should be put in the best possible physical condition before a weakened digestive tract, with the lesions due to hookworm attacks, is subjected to the shock of anthelmintic treatment.

SUMMARY

Our experimental findings indicate that oil of chenopodium should be accompanied by large doses of castor oil, and that when so given it is an uncommonly effective and quite safe anthelmintic for use against ascarids. Chloroform in castor oil, in therapeutic doses, is the most effective anthelmintic we have found for use against hookworms, and we consider it as safe as thymol or any other effective drug for use against hookworm disease.

OCCURRENCE IN CLINICAL TUBERCULOSIS OF SCARS FROM TUBERCULOUS CERVICAL ADENITIS

STANLEY L. WANG, M.D.
NEW YORK

It would seem that old scars in the neck due to tuberculous adenitis would be found with reasonable frequency in a large series of patients who are suffering from clinical tuberculosis. By this is meant scars from suppurating tuberculous cervical glands, or scars following operations on these glands. The removal of such glands is a common operation in surgical clinics, and in general and dispensary medical practice, patients with suppurating glands of the neck present themselves quite often for treatment. What becomes of these patients? Do they ultimately die from tuberculosis? There is a widespread belief that many do, for it has been almost a clinical axiom that scrofulosis predisposes to tuberculosis. The sure way to ascertain this would be to trace these patients through life, which is obviously impracticable. One may approach this from the other way and find how many tuberculous patients who for the most part have unfavorable prognosis, have neck scars due to tuberculous cervical adenitis. This, of course, is not definite, but in a group of patients presenting, for the most part, far advanced cases of tuberculosis, the data will be dependable. There may be objections that these scars may not be due to tuberculous disease, but a careful examination and inquiry into the history will exclude some, and the assumption that all are due to tuberculosis unless definitely proved otherwise will give fair conclusions and will place the errors on the safe side.

During the past year and a half, at Sea View Hospital, Staten Island, N. Y., 2,000 patients with clinical tuberculosis were examined for scars on the neck. The entire neck was inspected and palpated, and the patient was questioned as to the scars. Of the 2,000, there were about 1,600 who had moderately and far advanced pulmonary tuberculosis, and the great majority of these were far advanced, with an unfavorable prognosis. The remaining 400 had incipient (a very few), orthopedic, glandular, genito-urinary and surgical tuberculosis. A group such as this is a fairly representative series of the common run of tuberculosis, and it is fair to assume that it should give an idea of how frequently these neck scars occur.

Among the 2,000 patients, there were sixty-nine with neck scars. Of these, five were excluded: one whose scar followed an operation for wryneck, two from tooth abscess, and two whose scars occurred during scarlet fever. Of the remaining sixty-four:

The scars of twenty occurred in childhood, their clinical tuberculosis not becoming evident to them until after childhood. Fifteen were improving, five retrograding, twelve had pulmonary tuberculosis, four pulmonary and orthopedic tuberculosis, and four orthopedic tuberculosis.

There were eighteen whose scars appeared after childhood and before the onset of their clinical tuberculosis. Nine were improving, nine retrograding, sixteen had pulmonary tuberculosis, and two pulmonary and orthopedic tuberculosis.

There were nine whose scars occurred after the onset of their clinical tuberculosis. Five were improving, four were retrograding, seven had pulmonary tuberculosis, and two pulmonary and orthopedic tuberculosis. This group impressed one as having the poorest prognosis.

There were seventeen whose scars occurred at the same time at which their clinical tuberculosis began. Fifteen were improving, two retrograding, thirteen had pulmonary tuberculosis, one pulmonary and orthopedic tuberculosis, and three orthopedic tuberculosis. This group seemed to have less active tuberculosis and a better prognosis than any of the other groups. It was rather difficult to classify some of these as to their type, and some had cases probably of uncomplicated glandular tuberculosis.

The whole number of patients who had neck scars (sixty-four) is 3.2 per cent. of the entire group, and it was less than was expected. Slightly more than two thirds were improving, which is worthy of notice when the unfavorable far-advanced nature of the great majority of the 2,000 cases is considered. The number of patients who had orthopedic tuberculosis (sixteen) is large in proportion, since there were only about 250 orthopedic cases in the series.

These observations were made chiefly to learn how many patients with clinical tuberculosis had old cervical scars due to tuberculous disease which had occurred in childhood. There were twenty, 1 per cent. of the series. This also was a great deal less than was expected. This is of interest because of the present popular theory of childhood infection of Roemer, Much and others. According to this theory, all tuberculosis has its incidence in childhood; it is primarily a disease of the lymphatic structures, in which it is latent until it assumes the characteristic types. The tonsil is a frequent portal of entry for tuberculosis in childhood, and the cervical glands usually derive their infection by way of the tonsils. The tendency of tuberculous cervical adenitis is to suppurate and thus produce neck scars, or, if treated surgically, to produce scars, and yet only 1 per cent. of 2,000 patients with clinical tuberculosis showed this evidence of childhood infection. There seems to be a growing belief among many observers that simple glandular tuberculosis in childhood adds resistance to later tuberculous infection, and that few adults who show this die of tuberculosis. Furthermore, the radical removal of tuberculous cervical adenitis by surgery has many advocates who consider many of these cases as purely local lesions which, if excised, cause the patient little if any further trouble. These findings are in agreement with both of these beliefs, for few scars were found, especially childhood scars, and the majority were showing a tendency to improve

CONCLUSIONS

Scars in the neck due to tuberculous cervical adenitis are infrequent in clinical tuberculosis

Tuberculous patients having these scars generally show a greater tendency to improve with the usual sanatorium care than do others

Neck scars from tuberculous cervical adenitis in childhood are infrequent in adult clinical tuberculosis

Sea View Hospital, Staten Island

THE TREATMENT OF HYPOPYON KERATITIS *

F H VERHOEFF, M D
BOSTON

Of the serious corneal ulcers the most frequent are those due to pneumococci, while next in frequency of occurrence are those due to diplobacilli The characteristics of the pneumococcus ulcer, or ulcus serpens, are so well known that it is not necessary to discuss them here at length, but it may be well to emphasize certain features Undoubtedly the most common cause for this type of ulcer is trauma, but there are two other causes that are often not recognized, namely, herpes corneae and glaucoma Peters,[1] in fact, insists that the peculiar character of ulcus serpens is dependent on a neuropathic basis This I think is doubtful, but it is probable that in many cases corneal herpes permits the pneumococcus infection to take place After the infection has become well established the herpetic condition is obscured and so escapes recognition The course of these cases, however, usually seems to be no different from the frankly traumatic cases In cases due to glaucoma the failure to recognize the cause may prove disastrous In many of the eyes that have been removed for perforating ulcer of the cornea and submitted to me for examination I have found deep cupping of the optic disk, although the glaucomatous condition was previously unsuspected This mistake will less frequently be made if the tension of the affected eye is taken with the finger and the other eye is carefully examined for evidences of glaucoma The tonometer should not be used on an infected cornea, even after it has apparently healed, as the traumatism may have an unfavorable effect

As a rule an ulcus serpens appears less serious than it really is This is due to the fact that the leukocytic infiltration is often relatively slight and is most marked at the periphery of the ulcer, leaving the center comparatively clear The central clear area, however, is really the most severely damaged part of the cornea, for it is almost completely necrotic The pneumococci are usually most abundant in the infiltrated border of the ulcer because those in the center are cast off with the superficial layers as loss of substance occurs In rapidly advancing cases, however, before much loss of substance has taken place, I have found the surface layers of the central portion loaded with pneumococci The center of the ulcer may later appear more opaque owing to the deposition of fibrin and pus cells on Descemet's membrane behind it This is analogous to thrombus formation on the injured wall of a blood vessel

Although ulcus serpens is now known to be due to the pneumococcus, yet much bacteriologic work remains to be done in regard to it The fact that ulcus serpens never occurs in cases of pneumococcus conjunctivitis, while it is not infrequent in cases of dacryocystitis, would seem to show that some special strain or strains of pneumococci are required to produce it The fact, too, that ulcus serpens is rare in children, although the latter are especially susceptible to pneumonia and to pneumococcus conjunctivitis, also seems to point in the same direction It is possible, on the other hand, that this may be due to the fact that children do not often sustain the kind of injuries most likely to cause ulcus serpens, and that they are seldom affected with corneal herpes or glaucoma So far as I know, however, no careful bacteriologic investigation of this question has yet been made In view of the beneficial results of serum treatment obtained by Cole at the Rockefeller Hospital in cases of pneumonia due to certain strains of pneumococci, it is possible that such an investigation would be of value from the standpoint of treatment of corneal ulcers

The diplobacillus ulcer differs considerably in its clinical appearance from ulcus serpens, but if not properly treated is fully as destructive to sight There are several varieties of diplobacilli that may cause corneal ulcers, the most common being the Morax-Axenfeld All such ulcers seem to have about the same clinical characteristics, so that for practical purposes the diplobacilli may be identified with sufficient accuracy by the examination of smears It has been stated that it is impossible to differentiate by clinical appearances alone between pneumococcus and diplobacillus ulcers, but this is not in accord with my own experience Perhaps the most striking feature of the diplobacillus ulcer is the relatively slight general reaction of the eye compared to the extent of the ulcer This is manifested especially by the size of the hypopyon, which is relatively very small The ulcer itself is more uniform in appearance than an ulcus serpens, the marginal infiltrate being less marked and the whole ulcer having a gelatinous appearance, due to plastic exudate

The treatment of hypopyon keratitis has hitherto been highly unsatisfactory, judging by the fact that out of all the diverse methods of treatment no single one has been generally adopted It would be impracticable here to discuss each of these methods in detail, and I have therefore attempted to classify them as follows

Symptomatic Treatment—This includes the use of an occlusive bandage, hot applications, and atropin to combat the iritis The use of various nonirritating ointments may also be included under this head, since, judging by the ineffectiveness of still stronger antiseptics, their only value is to act as lubricants Ethylmorphin hydrochlorid (dionin) is also frequently used, and some surgeons employ miotics instead of atropin This method of treatment undoubtedly yields a fair percentage of relatively good results, a fact that is apt to be lost sight of when estimating the value of other methods

Serum Therapy—The antipneumococcus serum of Roemer has not yielded the results anticipated, and has therefore never come into general use As already pointed out, however, in view of the results obtained in cases of pneumonia at the Rockefeller Hospital, there is still a possibility that an immune serum may be developed that will prove effective in corneal ulcers due to certain strains of pneumococci.

---

* From the Massachusetts Charitable Eye and Ear Infirmary

* Read before the Section on Ophthalmology at the Sixty Eighth Annual Session of the American Medical Association, New York, June, 1917

[1] Peters Ueber traumatische Hornhauterkrankungen und ihre Beziehungen zum Herpes Corneae, Arch f Ophth, 1904, 57, 93

Vaccine Therapy.—If vaccine therapy is under any condition effective against pneumococci, it should be especially valuable in cases of ulcus serpens, for here we have a relatively minute localized focus insufficient to cause any appreciable systemic reaction. Nevertheless, no conclusive evidence has been brought forth that vaccines are of the slightest benefit in cases of ulcus serpens. Recently interest has been shown in the nonspecific treatment of infectious diseases by injections of other foreign proteins, but I am not aware that it has yet been tried in cases of corneal ulcer.

Chemotherapy.—As regards the treatment of localized infections in general, the ideal germicide, of course, would be one which destroyed the micro-organisms without seriously injuring the tissues. In 1907, with E. K. Ellis,[2] I made experiments with a large number of antiseptics claimed to be noninjurious to the tissues, and found that in every case their germicidal activity was destroyed by serum. This explained at once their ineffectiveness against infections as well as their nonirritating qualities. It seems to me that it is altogether unlikely that any chemical substance of simple structure will be found to fulfil the ideal requirements. In any case, dilute solution of the germicide and prolonged exposure to its action would probably be necessary for differential effects as between the organisms and tissues. Thus far, no germicide fulfilling the foregoing requirements has been brought forward with the possible exception of optochin.

Ethyl-Hydrocuprein (Optochin).—This was introduced by Morgenroth as a specific germicide against the pneumococcus. It seems, however, to have proved a disappointment in the treatment of pneumonia, owing to the fact that it cannot safely be given in doses sufficiently large to be effective. It has also been used as a local application in the treatment of ulcus serpens, and almost all the reports of cases so treated have been highly favorable. When added to serum, the hydrochlorid is immediately and abundantly precipitated, so that it is evident that only a minute quantity could penetrate inflamed tissues. It is stated, however, that enough remains in solution to give a certain amount of germicidal effect. It seemed improbable to me that this could be sufficient to be of service in the treatment of ulcus serpens, and I have therefore waited for more conclusive evidence before personally giving optochin a trial. In the meantime I have noted its action in a few cases of my colleagues in which it has been highly ineffective. It is noteworthy that even those reporting favorable results admit failures in certain cases. These are explained by assuming that the organisms develop tolerance toward the drug. I suspect, however, that the real difficulty is that the germicide cannot reach the organisms when the cornea is deeply infected. This is suggested also by the fact that many treatments are necessary, whereas if the germicide actually reaches the organisms in effective concentration, as supposed to be the case, it should be possible to sterilize the ulcer in one or two vigorous treatments.

Organic Silver Salts.—The best known of these are argyrol and protargol, but many others have been brought forward. Pitzman[3] has pointed out that their germicidal properties depend entirely on the amount of uncombined silver salt they contain. It is obvious that their irritating properties depend on this also. Thus argyrol contains a very small amount of uncombined silver salt and hence is almost nonirritating and nongermicidal, while protargol, which contains a relatively high proportion, is correspondingly more highly germicidal and also more irritating in solutions of the same concentration. So far as germicidal activity goes, the large amount of combined silver in argyrol is wasted. In other words, if solutions of each of the various organic silver compounds were made in such concentrations as to have the same irritating properties, they would each have practically the same germicidal powers. In 1906 I showed that the germicidal properties of argyrol and protargol are destroyed by serum, so that it is impossible for them to kill bacteria within inflamed tissues even if they reach the organisms.[4] Although it seems certain, therefore, that they are valueless in the treatment of corneal ulcers, their use for this purpose has not even yet been abandoned.

Tincture of Iodin.—This has been highly recommended for the treatment of corneal ulcers, but I fail to see how it can be of service except in the most superficial infections. While it is highly germicidal to bacteria immersed in it, as ordinarily applied to corneal ulcers, it cannot penetrate the tissues effectively. When it comes in contact with moist surfaces the alcohol is diluted and the iodin precipitated, or the alcohol precipitates the albuminous bodies encountered and is thus checked in its penetration. In this connection the following experiment seems to be of considerable significance. I applied tincture of iodin to a large colony of staphylococci growing on coagulated blood serum, allowing the solution to act for over two minutes. On then making a culture from the colony, I obtained an abundant growth. Unless, therefore, the solution is applied sufficiently long and in sufficient abundance as markedly to injure the tissues, no important germicidal action can be expected from it. This conclusion, I may say also, is in accord with my practical experience.

Zinc Sulphate.—Axenfeld[5] states that he has never failed to check the progress of a diplobacillus ulcer of the cornea by means of zinc sulphate. He uses strong solutions applied directly to the ulcer and weak solutions instilled into the conjunctival sac. A few observers report unsuccessful results with this treatment in severe cases. In laboratory tests zinc sulphate is said to have but slight germicidal action on diplobacilli, so that its therapeutic value is probably dependent on an inhibitory effect.

Anilin Dyes.—Pyoktanin (methyl violet) and methylene blue have been used in the treatment of corneal ulcers, but without marked success. Basic fuchsin and gentian violet have in recent years been advocated as effective nonirritating germicides, but experiments made by me go to show that their germicidal action is too feeble to promise any success in the treatment of corneal ulcers. Thus in 1 per cent solutions I found that neither of these dyes would destroy the *Staphylococcus aureus* with exposure of over an hour. A saturated aqueous solution of methylene blue was not destructive to this organism after an exposure of four and one half hours.

---

[2] Verhoeff, F. H., and Ellis, E. K.: The Bactericidal Values of Some Widely Advertised Antiseptics, The Journal A. M. A., June 29, 1907, p. 2175.

[3] Pitzman: The Antiseptic and Germicidal Properties of the Silver Salts and Preparations, Am. Jour. Ophth., 1912, **29**, 1.

[4] Verhoeff, F. H.: A Further Note on the Antiseptic Properties of Sodium Aurate, Correspondence, The Journal A. M. A., May 12, 1916, p. 1462.

[5] Axenfeld: Bacteriology of the Eye, translated by MacNab, New York, 1908, p. 301.

Ion Therapy—The attempt to sterilize corneal ulcers by treating them with solutions ionized by an electric current seems to me irrational, for in this way the antiseptics are dissociated into simpler elements whose action on the bacteria and the tissues must be still less differential than the original solutions

Thermotherapy—The effectiveness of the thermocautery in the treatment of corneal ulcers has been well demonstrated by actual experience The objection to its use is that so much tissue must be destroyed or injured in order to insure destruction of the organisms that excessive scarring results Several attempts have been made to obviate this difficulty Bourgeois[6] employed a blast of hot air, such as is used by dentists, Weekers[7] held the cautery point at a distance from the ulcer, while Wessely[8] employed a tube with a blunted point heated by steam More recently Shahan[9] has made a careful experimental investigation along this line, and has devised an instrument by means of which he can accurately control the temperature to which the cornea is heated He found, however, that with the moderate temperatures and relatively long exposures with which he worked, it was impossible to destroy bacteria within the cornea without severely injuring the corneal tissue

Prince[10] has advocated what he terms the pasteurization of corneal ulcers A conical shaped piece of copper is heated to a red heat and then held close to the ulcer until it cools The treatment is given once or twice daily Prince contends that the organisms are checked in their growth, thus allowing the natural defenses of the body better opportunity to cope with them I have tried Prince's method both clinically and experimentally, and have reluctantly concluded that it is of little if any value It was used in five clinical cases of ulcus serpens, all of a severe type In two of these cases perforation occurred, in one, Guthrie-Saemisch section was required, and two came to enucleation Experimentally I tested out the method by injecting staphylococci into each cornea of a rabbit and then "pasteurizing" one of them I found that when care was taken to inject about the same number of organisms in each eye, the resulting abscesses were practically identical in size

Working with Dr C E Hill, I have also investigated the possibility, suggested previously by Shahan, that intense heat briefly applied might be more injurious to bacteria than to the cornea It seemed to me that radiant heat offered the greatest possibility of success, since, owing to the transparency of the normal cornea, there would be a selective action on an ulcer owing to the absorption of the rays by the infiltrate, and since also, working with Bell,[11] I had found that the effect of radiant heat was greatest in the deepest layers of the cornea We therefore made use of a carbon arc and lens system which delivered enough radiant heat at the focus to ignite a match almost instantly The experiments were made by injecting staphylococci into one cornea of a rabbit and then exposing each eye in turn to the light for the same length of time, which was varied in different experiments We found that even when the control cornea was severely injured by the heat, an abscess nevertheless developed in the infected cornea These experiments seemed so conclusive that it appeared useless to proceed further If they had resulted more favorably, it was our intention to standardize the apparatus and also to attempt to devise some method for protecting the iris and fundus of the eye from injury

Phototherapy—Hertel[12] in 1903, and again in 1907, brought forward what he regarded as conclusive evidence of the value of ultraviolet light in the treatment of corneal ulcers I have elsewhere discussed Hertel's experiments and have pointed out that none of them were conclusive In addition I have recorded a series of experiments[13] which prove that it is impossible to destroy bacteria within the cornea by means of ultraviolet light without severely injuring the cornea In most of these experiments the cornea was exposed to the light immediately after it had been injected with bacteria, that is, while it was still transparent If under these conditions the bacteria could not be killed without undue injury to the cornea, it is obvious that it would be futile to attempt to kill them in a cornea infiltrated with pus cells and so made practically impassable to germicidal rays In fact, by the use of suitable screens, I found that the relatively long ultraviolet waves, the only ones that are able to penetrate the cornea, are much less injurious to the bacteria than to the cornea

Cauterization—Various chemical caustics have been advocated in the treatment of corneal ulcers, and probably any of them will check the ulcerative process if properly used, but the thermocautery seems to be generally preferred Of the chemical caustics, pure phenol (carbolic acid) is probably as good as any, if not better It has been shown experimentally by Guillery[14] that mineral acids should be avoided, owing to the danger of injuring the lens The chief objection to the use of caustics of any kind is the same as that which applies to the thermocautery, that is, the excessive scarring which results

Subconjunctival injections of irritating solutions for the purpose of causing severe reactions and thus combating the infection have been highly recommended in the treatment of corneal ulcers Fuchs[15] stated that he regarded this method of value in early cases but of no service in advanced cases I myself have found other treatment so effective in early cases that it has seemed unnecessary for me to give this painful method a trial

Operative Treatment—Stephenson[16] has pointed out that priority for the operation of incising corneal ulcers belongs to Guthrie, who performed the operation twenty-seven years before Saemisch The beneficial effect of this operation is generally so great as well as prompt that there is no question as to its effectiveness The explanation of its effect is probably that it reduces the pressure on the cornea and allows drainage to take place from the cut surfaces, while at the same time it causes the ulcer to be continually irrigated by fluid from the anterior chamber This fluid is no longer ordinary aqueous, but owing to the low intra-ocular pressure as well as the inflammatory reaction, it is almost pure serum and hence richly contains the bactericidal properties of the blood In rare cases, however, this operation fails and the ulceration continues, or intra-ocular infection takes place through the incision Probably in these cases either the organisms are unusually virulent or the patient's serum is lacking in immune substances

---

[6] Bourgeois Nouvelles considerations sur le traitement des ulceres infectieux de la cornee, Ann d'ocul, 1899, **122** 55, Le chauffage des ulceres infectieux de la cornée, ibid, 1911, **145**, 273

[7] Weekers Nouveau traitement des ulceres serpigineux de la cornee par le chauffage Bull de la Soc belge d'ophth, 1910 No 28, p 70

[8] Wessely Zur Behandlung des Ulcus serpens, Ophth Cong Heidelberg 1912, p 339

[9] Shahan Effects of Heat on the Eye, The Journal A M A, Aug 5, 1916, p 414

[10] Prince Pasteurization in the Treatment of Corneal Ulcers, Ophth Rec 1916, **25**, 177

[11] Verhoeff, F H, and Bell, Louis The Pathological Effects of Radiant Energy on the Eye, Proc Am Acad Arts and Sc, 1916, **51**, 692

[12] Hertel Experimentelles über ultraviolettes Licht, Ber u d 31 Vers d ophth Ges, Heidelberg, 1903, p 144, Experimentelles und Klinisches über die Anwendung lokaler Lichttherapie bei Erkrankungen des Bulbus, Arch f Ophth, 1907 p 275

[13] Verhoeff F H Ultraviolet Light as a Germicidal Agent, The Journal A M A, March 7, 1914, p 762

[14] Guillery Hornhautverätzung durch Säuren und ihre Behandlung, Arch f Augenh, 1909, **63**, 258

[15] Personal communication to the author

[16] Stephenson Priority, Guthrie or Saemisch Operation for Hypopyon Keratitis, Ophthalmoscope, 1910, p 266

In spite of the remarkable results usually following the Guthrie-Saemisch operation, it is generally employed only as a last resort, for although it may put a stop to the ulcerative process, the condition finally resulting is apt to be far from desirable Almost always there is anterior synechia with its attendant dangers of secondary glaucoma and sympathetic uveitis, while the irregular astigmatism resulting from the scar is apt to be of an extreme degree

Keratectomy—Foroni[17] reports exceptionally good results from dissecting away the superficial layers of the cornea in the ulcerated area, curetting the wound and irrigating with a 1 1,000 solution of mercuric cyanid That the results of this treatment are not all that could be desired, however, is shown by the fact that he finds it necessary in some cases to perforate the cornea in its periphery with the galvano-cautery I have never tried this method, but it seems to me unnecessarily severe

Conjunctival Flaps—The placing of a conjunctival flap over a corneal ulcer has been strongly recommended by Kuhnt and others as an effective method of treatment In the few cases in which I myself have tried this procedure, the flap has not remained in position long enough to be of any service Possibly my technic has been at fault here

Author's Method—With the limited number of cases at my command, it has seemed to me better to continue a method that was giving good results, to find out its exact limitations, and to attempt to improve it, rather than to change continually from one method to another and thus reach no definite conclusions In this way, during the past three years, I have worked out a method of treating corneal ulcers that has given results more satisfactory than has any other method I have employed or seen used I am far from regarding the method, however, as the final solution of the problem

The patient is placed in bed, the affected eye thoroughly cocainized, and a speculum inserted He is then told to look at various points on the ceiling until a position is found at which the ulcer is directly upward This position must be maintained throughout the treatment, but the patient seldom finds any difficulty in keeping his eye sufficiently steady Occasionally it has been necessary for him to fix his other eye on the finger of an assistant With a Beer's knife, incisions are now made in the ulcer thus The back of the knife is held toward the cornea and the point entered slantingly into the margin of the ulcer The knife is then pushed through the middle of the ulcer to the opposite margin, care being taken to make the incision as deep as possible without entering the anterior chamber It will be found that, owing to the slanting position of the knife, Descemet's membrane is pushed away from the point so that the incision may be carried down almost if not quite to this membrane without danger The point of the knife is now entered in the center of the incision just made, and a radial incision perpendicular to the latter carried to the margin of the ulcer A similar incision is then made in the opposite direction, so that the final result is a crucial incision In the case of large ulcers, several additional incisions should be made, starting each time at the center With the point of the knife the infiltrated border of the ulcer is now superficially curetted, and the material obtained used for the bacteriologic examination After this, the entire surface of the cornea around the ulcer is dried by touching it with small dry swabs of sterile absorbent cotton

The ulcer is now ready for treatment with the germicide, a highly concentrated Lugol's solution iodin, 25, potassium iodid, 50, water, 100 This is applied by means of cotton-tipped tooth picks, and the application should be limited to the ulcer itself, as the solution will quickly injure the epithelium Owing to the cornea's being dry, the solution has no tendency to spread beyond the ulcer After the entire area of the ulcer has been moistened, additional solution is added until there is an actual puddle on the ulcer This is allowed to remain five minutes, when it is quickly flushed out of the conjunctival sac by a jet of boric acid solution A rubber bulb filled with boric acid solution should be in constant readiness for this purpose, for should the patient move his eye abruptly and cause the Lugol's solution to flow over the cornea, it is necessary to wash it away at once If this should happen before the five minutes have elapsed, the cornea should be dried again and the Lugol's solution reapplied The treatment is absolutely painless

In cases of very small ulcers, the Lugol's solution is applied without making the incisions described In deciding whether or not to make the incisions, I do not depend entirely on the size of the ulcer, however, but also on the rapidity of its progress and the amount of general ocular reaction, as evidenced particularly by the size of the hypopyon In active cases, even when the ulcer is small, it is probable that the organisms have become disseminated for a considerable distance from the ulcer proper and hence may not be reached by the germicide unless the incisions are first made When there is doubt, the incisions should always be made, as they do not noticeably increase the opacity left by the ulcer In fact, as the ulcer heals, all traces of the incisions disappear

In cases of rapidly progressing ulcers of large size, with large hypopyon, after the foregoing treatment has been completed, I make a small puncture through the center of the ulcer with the Beer's knife, and evacuate the aqueous This puncture is not large enough to evacuate the hypopyon, and I believe it advantageous for the latter to remain It holds both the iris and lens away from the opening, and thus prevents anterior synechia and injury to the lens I have never seen any harm result from this central puncture, and I now always make it unless I am absolutely certain it is unnecessary In cases of suspected glaucoma, it should never be omitted Its chief disadvantage is that it causes more or less pain

The after-treatment of these cases consists in keeping the patient in bed with both eyes bandaged, the use of White's mercuric chlorid ointment as a lubricant, and in the instillation of atropin to keep the pupil open The beneficial effects of the iodin treatment do not become apparent until after forty-eight hours, when the ulcer appears cleaner, the hypopyon smaller, and the eye becomes much more comfortable In case the central puncture was made, the longer the anterior chamber remains empty the better If no improvement is noted at the end of seventy-two hours, and the anterior chamber has become reestablished, the treatment should be repeated

---

[17] Foroni Keratektomie Arch. f Augenh. 1915 78 279

It may be of interest to give the reasons that led me to adopt this method of treatment Although it was evident that we possessed no germicide that would destroy bacteria in the cornea without injury to the cornea itself, it seemed to me that some of the germicides must be far less injurious than others Moreover, since the cornea was already severely injured in the ulcerated area wherein the bacteria chiefly occurred, it seemed that a certain amount of additional injury would make relatively slight difference as regards the visual results It occurred to me, therefore, that Lugol's solution, which was known to be a powerful germicide, might answer my purpose I found that a freshly prepared solution even in as high dilution as 1 2,000 (iodin, 1, potassium iodid, 2, water, 2,000) would destroy the *Staphylococcus aureus* in less than one minute I also found, however, that when mixed with an equal volume of ascitic fluid, a solution of 2 1,000 would not kill this organism in twenty-four hours It was evident, therefore, that dilute solutions would be useless, since their germicidal activity would be destroyed as they permeated the tissue, and solutions sufficiently strong to overcome the neutralizing effect of the tissue fluid would be necessary In this connection I found by experiments on rabbits that while strong solutions promptly killed the corneal corpuscles, they had remarkably little effect on the corneal stroma For instance, a small amount of a 1 per cent solution could be injected directly into the cornea without causing a permanent opacity Evidently new corneal corpuscles made their way in from the periphery, and the original condition of the cornea was restored Since in corneal ulcers the corneal corpuscles are already largely destroyed by the bacterial toxins, it appeared likely that strong Lugol's solution would do no additional harm except so far as it destroyed a greater or less number of corpuscles at the periphery of the ulcer On the other hand, it was found that if an area about 5 mm in diameter was injected with the 1 per cent solution, it caused, owing to its prolonged action, softening of the corneal stroma and a permanent opacity

It is unfortunately not possible to produce in animals progressive corneal ulcers similar to those caused in man by pneumococci I was compelled, therefore, to test the value of Lugol's solution by actual trial in human cases At the outset I employed a 2 per cent solution and applied it by placing a glass tube over the ulcer and filling the tube with the solution This method seemed effective, but was difficult of application I then increased the strength of the solution to 5 per cent and used the method of making a puddle on the ulcer as mentioned above In cases of small ulcers this was uniformly successful, but in cases of larger ulcers it sometimes happened that the process would start up again at one point or another, thus indicating that bacteria in the comparatively normal cornea had not been reached by the germicide I then adopted the plan of making incisions in the ulcer for the twofold purpose of allowing the germicide to permeate the tissue more freely and of permitting drainage afterward At the same time the strength of the Lugol's solution was increased to 25 per cent Even with this powerful solution applied for five minutes, there was an occasional case in which evidently not all the bacteria were not killed In fact, judging by the amount of discoloration of the tissues, it was clear that in no case did the solution penetrate far into the normal corneal tissue For rapidly progressing cases, therefore, in which it was probable that the organisms had become disseminated far into the cornea away from the ulcer, the plan was adopted of making a central puncture in the ulcer to obtain as far as possible the additional advantage of the Guthrie-Saemisch operation without its disadvantages

Altogether I have treated forty-two cases of corneal ulcer with hypopyon by this method These cases were unselected except to the extent that only such cases were treated in this way as were regarded as sufficiently serious to require admission to the hospital Bacteriologic examinations, which were made in almost every case, showed the ulcers to be due either to pneumococci or diplobacilli

In twenty-one cases the ulcer was small, from 1 5 to about 4 mm in diameter, and the process was checked in every case In these cases the visual acuity at the time of discharge from the hospital was 20/70 or better in seven cases, 20/100 in five cases, 20/200 in six cases, and 15/200 in two cases In one case the acuity was equal only to the counting of fingers at 8 feet, but this was due to an older scar In eight cases the ulcer was of moderate size, but was sufficient to reduce the visual acuity to the perception of light or the counting of fingers Here the process was also checked in every case, but the resulting visual acuity was of course not great at the time of discharge, ranging from the counting of fingers at from 1½ to 8 feet In thirteen cases the ulcer was very large, involving from one-half to two-thirds or more of the corneal surface Here the process was checked in eight cases, but the visual acuity obtained was only equal to the perception of light or shadows In five cases the process was not checked, and in three of these enucleation was performed No doubt in some of the cases the visual acuity could later have been improved by optical iridectomy

The average age of the patients with small ulcers was 39 years, while that of the patients with larger ulcers was 50 years It would seem, therefore, that older persons allow the ulcerative process to gain greater headway before applying for treatment This, I think, is due in part at least to the lessened sensibility of the cornea and the weaker mentality of the older persons

In one of these cases the ulcer was associated with dacryocystitis In twenty-two cases there was a definite history of recent trauma Glaucoma was noted in one case, but may have been overlooked in others Diplobacilli were found in six cases In each of these the process was checked, except in one in which three-fourths of the corneal surface was involved at the time of treatment Owing to illness, this patient was not treated by me personally

Judging by my results, as well as by those of some of my colleagues who have also tried this method of treatment, I feel safe in saying that it will stop the progress of any corneal ulcer of small size and leave a minimal scar In cases of ulcers of moderate size the process will also almost always be checked by it, but in cases of very large ulcers failures will often occur, owing to the fact that the germicide cannot reach all the bacteria In the latter cases, however, so much of the cornea has already been involved that little is to be gained by checking the ulcerative process It is important, therefore, in the case of any ulcer to apply the treatment as soon as the patient presents himself In hospital practice, to save unnecessary delay, the treatment should be carried out in the outpatient department before the patient has been admitted to the wards

---

FURTHER STUDY OF THE EFFECTS OF HEAT ON THE EYE*

WILLIAM E SHAHAN, M D
ST LOUIS

In this work and in the work[1] reported at the 1916 session of the American Medical Association, the method of applying heat to the cornea has been one of direct conduction by means of hot metal placed in contact with the cornea Methods of radiation by holding hot objects near the eye, by convection, through hot air or steam, etc, have been unsatisfactory because of the difficulties in exact control both as to intensity and as to quantity

The difference between success and failure in applying heat in such grave conditions as serpiginous ulcer of the cornea is measured by only a few Fahrenheit degrees, as will be shown in the following experiments and case reports Moreover, different materials have different degrees of heat conductivity, just as they do of electric conductivity For an exact definition, therefore, *it is necessary to state the intensity as indicated* by the thermometer or thermocouple, and the material used for conducting the heat In all these experiments and cases the material used was brass plated with nickel

An experiment will make clear the need of stating the material used for conduction A mass of nickel-plated brass (the thermophor applicator described at the 1916 session) was heated to 150 F and applied to the cornea of a rabbit's eye for one minute The epithelium was destroyed over an area somewhat greater than the surface placed in contact with the cornea Bowman's membrane and the substantia propria were clouded so that the iris was scarcely visible through the heated area It took five days for the epithelium to be completely replaced, and the cornea was somewhat clouded for a month or more In contrast to this a test tube was filled with water, a thermometer placed in the water, and the whole heated until the thermometer indicated 160 F The rounded end of the test tube was then placed in contact with a rabbit's anesthetized cornea for one minute During this time the thermometer fell from 160 to 150 F There was no visible effect on the epithelium, Bowman's membrane, or any part of the eye The quantity of heat in the water and test tube was much greater (as measured in calories) than that in the brass applicator, but the heat in the brass applicator passed into the cornea with so much more rapidity that marked effects were produced If glass should be used as an applicator, it would be necessary to institute a series of experiments to determine how high its temperature would have to be raised in order to produce desired effects Glass is a poor heat conductor The same condition applies to all other conductors This probably accounts for the fact that the limit of heat tolerance for different eye tissues has been variously stated by different observers

The most important application of heat is in serpiginous ulcers of the cornea It was the routine loss of eyes afflicted with such ulcers that inspired this whole work These ulcers are ordinarily pneumococcus infections, and are *characterized by appearing nearly* always singly as virulent ulcerative processes deep within the substantia propria There is marked conjunctival injection, sometimes much chemosis, and after a few days, pus in the anterior chamber (hypopyon) The organisms advance in all directions from the primary focus, and are most virulently active beneath Bowman's membrane and where not exposed to the air It is owing to the fact that the organisms are deep within the substantia propria that practically all surface medication has proved a failure It is also noteworthy that experimental inoculation with pneumococci in numerous cases was produced only by breaking through Bowman's membrane and inserting the bacteria beneath it, and also that when large areas of epithelium were removed around such ulcers, further progress was not made *on* Bowman's membrane, but *beneath* it, while the epithelium was rapidly replacing itself This replacement of epithelium occurred so rapidly in some cases that the ulcers were roofed over and converted into abscesses This is important because it permits us to use therapeutic agents which destroy the epithelium wherever applied This does not hold, however, *in streptococcus or pyocyaneus infections*

When the investigation was started it was hoped that pneumococci could be killed within the substantia propria by a degree of heat below the limit of tolerance of the substantia propria It was found that 130 F for ten minutes was the limit of tolerance of the substantia propria when the heat was applied through a nickel-plated brass conductor This was tried on various pneumococcus ulcers and resulted in disappointment It was found that after such applications positive cultures could be obtained from the site of application, and that the heat which passed through the cornea was sufficient to cause atrophy of iris tissues without permanent clouding of the cornea By means of thermocouple measurements it was found that heat so applied passed rapidly through the cornea, and that when a constant temperature was applied to the anterior surface of the cornea, the posterior surface reached a constant level in about one minute

Another series of investigations was then undertaken Inoculations of pneumococci were made in a number of eyes Each eye of each rabbit was inoculated One was treated with heat and the other left untreated, as a control There is a tendency to spontaneous healing of pneumococcus ulcers in rabbits' eyes Accordingly rigid controls are necessary for preventing misleading results Gradually increasing degrees of heat were applied by means of nickel-plated brass thermophor points for one minute only When applications of 152 F for one minute were reached, the ulcerative process was stopped both bacteriologically and clinically A detailed history of one of the rabbits will show the action of treated eye and control

RABBIT 26—Inoculated O D and O S, July 13, 1916, with pneumococci

July 14 O D, vigorous infection Area 7 mm in diameter stains with fluorescein Took culture Applied 152 F somewhat intermittently for one minute, after which ulcer appeared dry and clean. Washed with physiologic sodium chlorid solution Took culture. O S, vigorous infection, area 3 mm in diameter stains with fluorescein Washed with physiologic sodium chlorid solution

---

* From the Laboratory of Ophthalmological Pathology, Washington University Medical School

* Read before the Section on Ophthalmology at the Sixty Eighth Annual Session of the American Medical Association New York June 1917

[1] Shahan W E Effects of Heat on the Eye The Journal A M A Aug 5, 1916 p 414

July 15 O D, ulcer quiet No discharge, no hypopyon O S, ulcer very active, much discharge, no hypopyon

July 17 O D, profuse growth on culture, taken before heating No growth on culture taken after heating Eye quiet. Epithelium completely replaced Thin gray spot on site of ulcer O S, much discharge, cornea clouded Deep ulcer Area 5 by 8 mm stains with fluorescein

July 21 O D, entirely quiet Gray central area becoming thinner O S, active ulceration Pupil filled with a membrane Whole cornea opalescent Considerable discharge through the epithelium, which has covered ulcer so that fluorescein does not stain

July 24 O D, entirely quiet O S, severely inflamed Vessels extend into cornea about 4 mm from all parts of limbus Center of ulcer stains with fluorescein

July 27 O D, entirely quiet. O S, still severely inflamed Vessels extend as a dense red zone 5 mm into cornea from all parts of limbus

July 31 O D, entirely quiet O S, site of ulcer yellow, broken down and excavated Whole cornea up to margins of ulcer filled with a dense network of blood vessels

August 3 O D, entirely quiet O S, site of ulcer organized Still yellow deep within substantia propria Hyphemia

September 29 O D, thin gray area at center of cornea No iris changes O S, vessels in cornea all atrophied Small gray area center of cornea Yellowish deposit along lower part of cornea. Some clouding anterior capsule Firm posterior synechiae

This was repeated on rabbits with variations, sometimes with, sometimes without hypopyon, until it seemed reasonably certain that 152 F applied for one minute was sufficient to stop the ulcerative process

It now became desirable to know how much damage this amount of heat did when applied to a normal eye This was applied to various eyes, and it was found in general that there was complete destruction of the epithelium over an area somewhat larger than the point used With a 5 mm point, for instance, there was an area 5 by 6 mm of denudation The surface of the cornea was clouded so that often the iris was not visible through it The epithelium replaced itself in four or five days, and the clouding slowly diminished A rabbit with O S heated so, July 27, 1916, now (Jan 30, 1917) has a faint nebula at the site of application The nebula is difficult to see without oblique illumination and the aid of a magnifying glass

It would seem, therefore, that this method of thermotherapy offered much in the deep treatment of pneumococcus infections, and it was felt that the time was ripe for trial on human eyes when opportunity offered

To date the following patients have been treated

Case 1—Coal miner, aged 39, consulted Dr E C Spitze, East St Louis, Dec 17, 1916 A foreign body was removed from near the inner limbus There were two small foci of infection at the site of the foreign body Ulcers were cauterized with saturated phenol iodin solution The foci coalesced and the ulcer slowly increased in size despite active daily treatment Dec 28, 1916, Dr Spitze brought the patient to me for trial of heat treatment The ulcer then bordered the limbus and extended about 3 mm out into the cornea Trial of methylene blue and 1 per cent silver nitrate solution to the walls of the ulcer was advised Dr Spitze did this and also made subconjunctival injection of 20 mm of 1 3,000 mercuric chlorid solution The patient was now in the hos- pital The ulcer was steadily growing worse

Jan 8, 1917 Dr Spitze again sent the patient to me The ulcer now extended 5 mm along the limbus and 4 mm into the cornea There was a dark border where the silver nitrate was applied, and beyond this a yellow zone of virulent infection Hypopyon was 1 mm high The patient complained much of pain Heat was applied at from 150 to 152 F with a 5 mm applicator for one and one-fourth minutes to the ulcer under thorough anesthetization with cocain, 5 per cent in suprarenal extract, 1 1,000 The application appeared to cause but little pain After the application the yellowish color was changed to a grayish hue The epithelium was destroyed over an area extending 1 mm beyond the margin of the ulcer

January 9 The patient spent a more comfortable night, the ulcer was quieter and grayish in appearance The hypopyon was unchanged Subsequently there was very little pain The hypopyon disappeared and the ulcer became quieter until January 13, when there was a slight renewal of activity deep within the substantia propria in the border of the ulcer nearest the center of the cornea There was a slight hypopyon with renewal of pain Heat at from 150 to 152 F was then applied for one minute with a 5 mm applicator The edge of the applicator was pressed with special firmness against the most active part of the ulcer There was rather extensive coagulation of the new epithelium that had grown over the site of the ulcer since the first application of heat

January 15 The ulcer was quiet There was no discharge The hypopyon was gone There had been no pain since three or four hours after the application Most of the heated area was still bare of epithelium

January 20 The patient had been slightly uncomfortable for the last two days There was no discharge There was a faint diffuse staining with fluorescein along the edge of the ulcer nearest the center of the cornea There was no hypopyon A slight gray infiltration along the central and lower edge of the site of the ulcer may have indicated some pneumococcic activity deep within the substantia propria Atropin and cocain (oil solution) was used It was decided to wait another day before applying heat

January 21 The patient was comfortable last night. The gray infiltration appeared to be breaking up into isolated foci There was no hypopyon There was no staining with fluorescein Coddington lens (1 inch focus) revealed the site of the ulcer nearly surrounded by a narrow bulla Atropin and cocain were used

January 24 The eye was quiet The site of the ulcer was filling in There had been a severe iritis along with the ulcer There were numerous posterior synechiae and some deposit of the anterior capsule $V = 3/60$ The ulcer did not reach the center of the cornea, and if the deposit on the anterior capsule clears up good vision should be obtained This patient was seen daily either by Dr Spitze or myself, and is now in Dr Spitze's charge Treatment was complicated by a suppurative postethmoidal and sphenoidal sinusitis These conditions were cared for by Dr Arbuckle.

February 10 Dr Spitze telephones that there has been no renewal of the ulcerative process The cornea has cleared up and the globe is slowly quieting down

Case 2—Man, aged 56, appeared in Dr William F Hardy's service at Washington University Clinic, Jan 16, 1917, with a corneal ulcer 6 by 8 mm staining brightly with fluorescein The eye was blind as the result of an old injury It was treated with silver nitrate, 0 5 per cent, and atropin It was bandaged

January 17 All the symptoms had increased The treatment was the same

January 18 A very profuse mucopurulent discharge was soaking the bandage and gumming up the lids and lashes The patient had had much pain last night There was moderate hypopyon The ulcer was larger Cultures revealed probably pneumococci submerged in staphylococci With the thermophor, heat was applied at from 150 to 152 F for one minute to the upper half, and one minute to the lower half of the ulcer with a 5 mm point The whole surface of the ulcer was made somewhat gray by the heat

January 19 The patient complained of pain in the head and the left jaw last night There was much less discharge The ulcer was cleaner There was not much pain in the eye The hypopyon was about the same as yesterday Silver nitrate, 0 2 per cent, and atropin were used A bandage was applied

January 20 The patient passed a comfortable night There was very little discharge The ulcer was quiet. The patient had the notion that the treatment (heat) had affected the other eye. No physical evidence of this was found He could not be rid of the notion Treatment was the same as before

January 22 The eye had not been dressed for two days The dressing was dry The 'eye felt fine" The hypopyon was gone. There was a small active area at the upper margin of the ulcer This should have had heat treatment with a small crescentic applicator The patient refused to permit this Treatment was the same

January 23 The patient had much pain last night There was a moderate discharge The active area noted yesterday was extending rapidly downward over the former site of the ulcer The patient refused heat He was turned over to an assistant for routine treatment He disappeared from the clinic. This eye might have been saved either by a higher or more extensive initial application, or by repeating the application over the small area of exacerbation as soon as it appeared

Case 3.—A coal miner aged 46 was referred to me by Dr Spitze for heat treatment and has since been cared for by us jointly

January 18 The patient was struck in the right eye five days ago by a piece of coal There was an ulcer at the center of the cornea 5 mm in diameter Hypopyon was 1 mm high Cultures and smear revealed pneumococci There was very marked chemosis The bulbar conjunctiva overhung and lay on the cornea for about 1 mm

In this case the serious mistake of explaining the working of the thermophor to other physicians in the presence of the patient was made. The applicator was felt by these physicians and the audible comment on its hotness made As a result the patient was nervous and apprehensive, expecting his eye to be burnt. Heat from 150 to 152 F, was applied for one minute somewhat intermittently The patient did not hold his eye still This was done by artificial light, and slight changes in the hue of ulcer could not be made out.

January 19 Dr Spitze reported that the patient had very little pain last night.

January 20 The ulcer was much worse and was spreading in all directions The hypopyon was larger The ulcer was too large to be covered by a 5 mm thermophor point Heat, from 150 to 152 F was applied to the upper temporal surface of the ulcer for one minute and also to the lower nasal surface for one minute Continuous applications were made The patient exhibited some signs of pain

January 21 Dr Spitze reported the ulcer clean and much better

January 22 The eye had not been dressed for about twenty hours There was little complaint of pain The ulcer was clean The bandage was dry There was no discharge There was a small area of activity at the upper margin and another at the temporal margin of the ulcer Heat from 150 to 152 F, was applied to each of these for one minute with a 2 mm applicator They were washed with physiologic sodium chlorid solution Atropin and cocain (oil) solution was used

January 23 The patient had considerable pain especially in the head last night The ulcer was generally clean The active area at the upper margin of the ulcer was still somewhat active The active area at the temporal side was quiet The eye felt fine this morning The hypopyon was smaller

January 24 The conjunctiva at the upper limbus overhung the cornea and extended downward on it for 2 mm Beneath this fold and sharply defined by it was a very active deep area of infection. All the rest of the cornea was quiet and translucent, allowing all parts of the iris and pupil to be seen This focus emphasized the previous statement that pneumococci are most virulently active where not exposed to the air By means of forceps the overlapping conjunctiva was held away from cornea and 154 F was applied to the ulcer for one minute with a crescentic pointed applicator

January 25 The patient had rather marked pain last night. The ulcerative process had stopped. There was a small quantity of fresh blood within the substantia propria at the center of the cornea This was probably due to a small central perforation although the anterior chamber was not collapsed and the iris did not touch the cornea This perforation confused the effects of the heat somewhat, as such ulcers often improve rapidly after corneal perforation The hypopyon had gone

February 6 There had been no pain since the last note Chemosis was gone Epithelium was growing in over the surface of the cornea Tension was subnormal The anterior chamber was very shallow or absent The iris and pupil were still visible although the cornea was now somewhat turbid as a result of reparative processes There had been no foci of infection since the last heat application

The ultimate outcome is still pending The usual course of such a severe infection as this is total loss of the cornea with expulsion of the lens etc

Case 4.—A laborer aged 39, was referred to me for heat treatment by Dr Meyer Wiener and treatment has been conducted by us jointly The man had been struck in the left eye three weeks before by a nail There was a perforating wound of the cornea somewhat nasal to the center A yellow abscess 2 mm in diameter extended nasally from the wound toward the limbus Earlier in the case this was an abscess with hypopyon, and the diagnosis of pneumococcus infection was established by Dr Wiener Under surface medication this improved until the epithelium covered the ulcer and converted it into an abscess Improvement then ceased and extension began in the substantia propria There was an exudate on the anterior capsule, and numerous posterior synechiae

Jan 29, 1917 Under thorough anesthesia with 5 per cent cocain in suprarenal extract 1 1,000 from 154 to 155 F of heat was applied for one minute with a 2 mm applicator Continuous application was made The patient had some pain After the application an area 4 mm in diameter stained with fluorescein The center of the abscess stained more deeply than the rest of the area, which would indicate that the abscess had been unroofed

February 2 The patient had had very little pain since the application of the heat. There was now a small moderately active ulcer at the deepest part of the former abscess The epithelium was all replaced except over this small area

February 5 There was an exacerbation, with more pain The ulcerative process was active, 153 F was applied for one minute with a 2 mm applicator The area about the ulcer turned slightly gray The deepest part of the ulcer still appeared of a somewhat yellow hue The application caused but little pain Half an hour after application, the patient complained of the eye burning This was quieted with an instillation of atropin and cocain oil solution

February 8 There had been no pain since the last application There was no discharge There was no activity except possibly in the center of the site of the ulcer deep within the stubstantia propria

February 10 There had been continued improvement, and no further pain The site of the ulcer was somewhat gray There was no staining with fluorescein In this case it would have been better to use an applicator with a somewhat rounded bullet pointed tip than one with a flat surface 2 mm broad The heat would have then been carried more effectively into the center of the ulcer Such applicators have since been constructed

These cases tend to confirm the experimental conclusion that heat, when properly used, is an effective therapeutic agent in pneumococcus infection of the cornea It will be observed that the temperature is about what is stated as necessary for the immediate death of pneumococci in culture (from 65 to 70 C, 149 to 158 F.[2]) All temperature readings given in this article are those indicated by the thermometer These readings are the ones most convenient to use in actual practice In the previous article it was shown that the temperature of the surface in contact with the eye was less than that indicated by the thermometer, and that as the temperature increased this difference increased When the thermometer indicates from 150 to 155 F, the temperature of the surface in contact with the cornea, while in contact with the cornea, is about 4 F less than the thermometer shows The temperature of 152 F, therefore, which was found sufficient for the death of pneumococci in the cornea of the rabbit's eye, was actually only about 148 F This difference was measured by means of a junction of a thermocouple placed in a fine hole drilled through the tip of the applicator parallel to the surface in contact with the eye, and as close to it as possible

---

[2] Besson Technique microbiologique Ed. 4

In all the work up to the present, the thermophor used has been the compact but rather complicated one shown at the Detroit Session[1] It consists of a resistance coil, sensitive regulating strip, platinum contacts, etc, and was primarily designed for maintaining constant temperatures in the applicators for long periods of time For practical purposes for one minute applications, a much simpler apparatus can be used

The parts of such a simplified instrument are shown in Figure 1 In the left hand part of this illustration are four bullet-shaped objects These are the applicators Each one is hollowed out so as to receive the bulb of the thermometer To the right of these is shown the "core" with an applicator and thermometer in position This core is a heavy piece of brass (or copper) tubing 4 inches (about 10 cm) long and 9/16 inch (about 14 mm) in outside diameter One end has a lock-nut in it for holding fast the thermometer, while the other end is reamed out properly for snugly receiving the applicators The larger object to the right is a metal case 1¼ inches (about 32 mm) in diameter, and a little over 4 inches (about 10 cm) long This is heavily lined with felt, has an opening at each end and a hollow space through the center just large enough to receive the core It is an insulating jacket for retaining the heat Figure 2 shows the jacket with core, thermometer and applicator in position as when ready for use

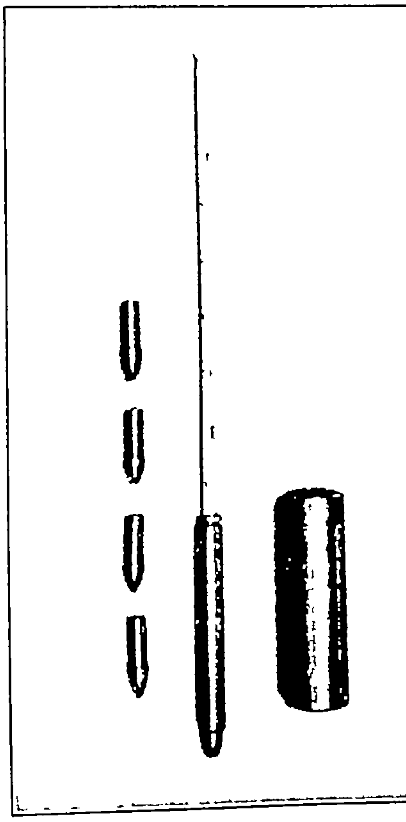


Fig 1—Thermophor parts applicators, core with applicator and thermometer in position and felt lined insulating case.

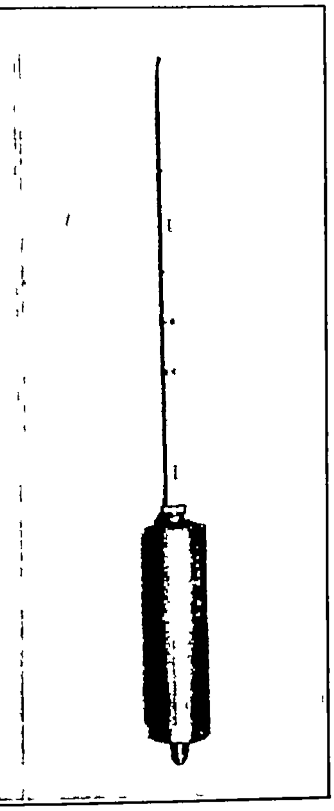


Fig 2—Assembled thermophor, as it appears when ready for use

When it is desired to use the instrument, a properly shaped applicator is selected and slipped into the end of the core The thermometer is then slid through the lock-nut and core until its bulb is in the applicator as far as it will go The thermometer is then fastened in place by a few turns of the lock-nut Then, with the thermometer used as a stem, the core is held over a flame, as that of a Bunsen burner, until the mercury in the thermometer reaches about 170 F The core is then slipped into the insulating jacket, where it will be held by the friction of the felt The mercury in the thermometer is then observed until it falls to 156 F At this instant the tip of the applicator is placed in contact with the ulcer and held there for one minute During this time the mercury will fall from 5 to 10 F, according to the size of the tip of the applicator The method of use is illustrated by the following case

A coal miner, aged 50, was referred to me for heat treatment, Feb 13, 1917, by Dr E C Spitze of East St. Louis He had been struck in the left eye ten days previously by a piece of coal A pneumococcus infection set in and was treated by various cauterizing agents by Dr Spitze Also a hot copper mass was held as near the ulcer as the patient could stand for five times Despite these measures, the ulcer steadily increased in size and severity When he came to me, February 13, there was an ulcer 3 by 2 5 mm in the lower nasal quadrant of the cornea nearer to the center than the limbus There was marked injection of the bulbar conjunctiva, beginning iritis and much pain The patient had been unable to sleep the past two nights There was moderate discharge The stage of hypopyon had not yet been reached A smear revealed pneumococci

The eye was thoroughly anesthetized with 5 per cent. cocain in suprarenal extract, 1 1,000, for about fifteen minutes During this period the applicator, in position in the thermophor, was held against the ulcer several times before it was heated so as to accustom the patient to it Care was taken that the word "heat" was not used in his hearing When the eye was ready the core was slipped out of its jacket and heated over a Bunsen burner out of sight of the patient. The core was then slipped back into its jacket and the instrument laid on a table in view of the patient while the mercury was falling to 156 F During this time more anesthetic was instilled and the thermophor picked up At the proper moment the patient's lids were held apart with the fingers of one hand while the applicator in the thermophor was held against the ulcer with the other The patient did not notice any difference between this application and the former ones made before the core and applicator were heated Consequently he was calm and held perfectly still The application, therefore, was constant and thorough. A casual question afterward elicited the response that it did not hurt. A 3 mm applicator was used for this An area 4 5 mm in diameter was denuded of epithelium Shortly after the application considerable pain developed and was controlled by cocain, or oil solution of atropin and cocain, about every half hour for about three hours The pain was such as follows a burn

February 14 The patient "slept fine" last night. There was no discharge No pain was felt The ulcer was clean and everywhere free from yellow infiltration Epithelium was replacing itself from all parts of the periphery The area of denudation was now 3 5 mm in diameter Atropin and cocain (1 per cent each) oil solution was used several times Excellent mydriasis was obtained

February 15 There were no pain and no discharge The ulcer was replaced by gray surface The area of denudation was 3 mm in diameter It was washed with physiologic sodium chlorid solution Atropin and cocain in oil solution were used A light bandage is kept on all such eyes until the epithelium is completely replaced

February 16. There was no complaint. The area of denudation was 2 mm. in diameter. Treatment was as described above.

February 17. There was no complaint. The area of denudation was 1.5 mm. in diameter.

February 19. There was no complaint. The conjunctival injection was disappearing. An area of 0.75 mm. stained with fluorescein. There was steady filling in of the excavation in the substantia propria. There was no undermining or any symptom of pneumococcic activity. With + 1.50 sph. V. $^{20}/_{60}$ +. The iritis had done no harm. The nebula was eccentric. The prognosis for complete recovery was absolutely good. Yet I have seen just such cases as this go to complete destruction of the cornea with extrusion of the lens in my own hands as well as in the hands of my associates, despite most vigorous and conscientiously applied methods. The somewhat higher initial temperature of 156 F. was used because the temperature of 152 F. constantly maintained did not always stop the process in one application in the human cornea and because in the simplified thermophor the temperature is steadily falling during the application.

In using the thermophor care must be taken to see that the thermometer is in order. One series of experiments was spoiled by a small volume of gas (some thermometers have a small amount of nitrogen in their stems) breaking the column of mercury and holding it so that the parts could not reunite. When this occurs the thermometer bulb is put into a freezing mixture and cooled until the mercury is all in the bulb. The gas then diffuses itself in the stem and the mercury column rises unbroken. Another series was spoiled by an appreciable quantity of the mercury becoming fixed in the small dilatation at the top of the thermometer stem. This gave false readings which caused the use of points hotter than was desired. In this case the bulb of the thermometer is cautiously heated over a flame until the mercury in the stem reaches and unites with that in the dilatation. On cooling, the mercury sinks as a continuous column and correct readings are obtained.

NOTE.—Since the foregoing article was written, nine additional cases of serpiginous (pneumococcus) ulcer have been treated by means of the simplified thermophor. The results have been most gratifying. The infective process was stopped definitely in all but one case by one or two heat applications. It was found best, however, to use an initial temperature of 158 F. instead of 156 F. as being more certain to stop the process in one application of one minute's duration. Also a series of experiments on the normal corneae of rabbit's eyes showed that one minute applications up to 170 F. merely increased the depth and intensity of the resultant nebula without causing any necrotic changes leading to corneal perforation. A temperature of 190 F. (dropping to 180 F. during the one minute application) caused intense whitening of the substantia propria followed in a few days by extensive vascularization of the treated area and some bulging of this area but no necrotic changes leading to perforation.

The effective temperature 158 F. for one minute is therefore far within the limit of safety for therapeutic uses on the cornea.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. VERHOEFF AND SHAHAN

DR. WILLIAM C. POSEY, Philadelphia: At Wills Hospital we see many infected ulcers of the cornea. Our method of procedure is as follows: In mild cases if we find the Morax-Axenfeld bacillus we use zinc, often with excellent results. If the pneumococcus is found we use ethyl-hydrocuprein (optochin) and often in mild cases the results are good. During the past winter we have been using the pneumococcic serum. Before coming here on questioning the house surgeon, who has been following up these cases, I found that he was not sure that he had seen any one case in which the serum had been of positive worth. We see many bad cases in which the patients have been injured in the mines. They do not get to us until some days afterward, so that we frequently find half or three quarters of the cornea ulcerated and exudate in the anterior chamber. In these cases we do at once a Saemisch section—a modified Guthrie-Schwenk-Saemisch section. We follow the method outlined by Dr. Schwenk. The patient is etherized and after the knife is carried into the anterior chamber, instead of drawing it out at once so that the aqueous flows out rapidly the knife is rotated and the pus slowly flows away. Frequently such eyes heal without prolapse of the iris and very often without anterior synechia so that after iridectomy is done they have useful vision. I hope Dr. Schwenk will speak of the method. After the hypopyon has been allowed to flow out iodoform is dusted on the surface of the eye and a compress bandage applied. Dr. Verhoeff's deductions are scientific and logical and his methods of treatment certainly demand a fair trial. His results, however, in his bad cases I do not think are as good as those we have had at Wills with the methods I have just described. Out of forty-two cases, twenty-one were very bad cases in which no vision was saved in his series; three eyes had to be enucleated, two others he says were lost probably also demanding enucleation; five of the twenty-one bad cases were lost. Also as he says if iridectomy could have been performed he would have obtained useful vision.

DR. EDGAR S. THOMSON, New York: I am somewhat at a disadvantage in that I received one of Dr. Shahan's thermophors only a few days before the meeting and was unable to use it because we had no suitable cases at the time. However, I should like to say that my experience has been the general one with regard to these cases. The pneumococcic serum it seems to me has doubtful value. With optochin some improved and others were disappointing, and of course we know the value of cauterization. The principles on which Dr. Shahan is working are incontrovertible. A method to do the least possible damage to the cornea and at the same time destroy the pneumococci is what we want. We have had evidence of the clinical value attached to heat so that I think his method deserves extensive trial. He has fairly well shown that there is not much damage to the cornea in this one minute application. Whether it will destroy all the infection in this class of ulcers is another question. We all know that the virulence of bacterial strains varies and a large series of observations is necessary to determine the status of the method. The outlook seems to me to be rather hopeful.

DR. PETER N. K. SCHWENK, Philadelphia: The modification of the Saemisch incision is a simple one and to my mind very important. Saemisch passed his knife across the anterior chamber, made a puncture and counter puncture, the cutting edge of the knife anteriorly, and cut directly forward, cautioning not to rotate the knife on its axis. That relieved the tension suddenly and naturally pushed forward the iris, lens and the contents of the ball. It occurred to me that after the counter puncture if the knife was made gently to press backward to equalize the tension, then rotated on its long axis, causing a gap or opening at both ends of the knife to allow the fluids in the anterior chamber to flow out and gradually release the pressure until tension was nil, then to replace the knife edge outward and cut out slowly, it would prevent the prolapse of the iris. The operation must be done under general anesthesia and the incision must not be made rapidly but patiently and slowly. If you do that you will have no anterior synechia. At Wills Eye Hospital we get the majority of the patients before the time for operation has arrived and cure them. Unfortunately, we get neglected cases from the country towns and especially from the coal regions, and these are the patients on whom we are obliged to operate. Of late, I have paid much attention to the subject, and I believe there are several grades of the pneumococcus varying in strength, as described by Henderson and Lehnfels.

Depending on infection with malaria, a 3 per cent. solution of quinin has been used, supplemented by about 8 grains of quinin a day in 2 grain doses This arrests the process without corneal destruction But the pneumococci of the first type are the destructive pneumococci Lately, after having cocainized the cornea, and applied phenol, making a thorough application, wiping off the white film and again reapplying the phenol, followed by a free application of glycerite of tannin, which will agglutinate the streptococci or pneumococci in the conjunctiva, I have found this to be one of the most satisfactory treatments My last four patients have been treated by this method Some say we should confine the patients to bed Three patients coming from the country nearby I wanted to admit to the hospital I believe they saved their eyes by declining Confinement is deleterious and they should stay outdoors

Dr. John E Weeks, New York In regard to the diplobacillus ulcer, if our bacteriologic examination shows it to be such, the zinc salts are specific But let us understand what the condition is in pneumococcic ulcer as described by Morax and Axenfeld and demonstrated by microscopic section There is no overhanging lip and edge when the ulcer is not advancing, but when the ulcer is advancing there is an overhanging lip and the ulcer is typical We will find the pneumococci in the lamellae of the cornea which have not broken down We should reach these pneumococci with our treatment It is my habit to cocainize the eye thoroughly and cut away the lip and gently curet the base of the ulcer Then I have a surface to which I apply my antiseptic or germicide, whatever it may be. I have found, if I use a germicide other than the cautery or heat, that formaldehyd is one of the best we have It has given in my hands better results than the tincture of iodin or any iodin preparation Formaldehyd solution in the ordinary commercial strength reduced to 8 or 10 per cent in sterile water, should be applied to the surface of the ulcer, particularly in the vicinity of the pneumococcic infection That should not be allowed to spread out over the epithelium The epithelium should be dry, the surface of the ulcer should be dry, and then this application, which will not flow over the cornea, made to the base of the ulcer A surer way is to apply heat, particularly to this portion of the ulcer For the application of heat it is my plan to use a platinum bulb with a spirit lamp, bring it to a red heat, apply it carefully, touching every portion of the surface, but lightly, so that the resulting scar will not be very dense Afterward I use an ointment of mercuric chlorid 1 3,000 or 5,000 in petrolatum and bandage the eye If the tension of the eyeball is plus, I use a drop of pilocarpin That, in cases in which the ulcer is not very far advanced, will bring about a cure in a short time The eye should be treated and the bandage renewed about three times a day If after a day or two there is a spot of inflammation, renew the cauterization at that point

Dr Elmer G Starr, Buffalo I have great faith in covering the ulcerating cornea with conjunctiva Dr Verhoeff speaks of this, but is not impressed with its virtue He speaks of the difficulty of keeping the conjunctival flap in place It is often difficult to do this Of course if the ulcerating area is not covered we cannot expect much benefit from the flap Most authorities who mention covering the ulcer with a tongue or flap of conjunctiva speak of this difficulty, and it is true that where a small tongue of conjunctiva is stretched across the cornea under considerable traction the retaining stitches are prone to cut out within one to three or four days The difficulty which I experienced with that led me to adopt a different technic Latterly now in extensive corneal ulcer, my plan is to incise the conjunctiva all around the cornea, undermine it well, put in a purse-string suture and cover the entire cornea in that way There is no particular tension at any point and the suture holds very much better I believe the ulcer must be covered and kept covered, not for a few days, but for a good many, preferably for a week or two in extensive, deep-seated ulcer Where I have been able to cover the cornea and keep it covered I have yet to be disappointed in the result It seems to me Dr Shahan's results have been very promising indeed I should like to ask what his procedure is in ulcers involving one-half or two-thirds of the corneal surface Does he attempt to cover the entire surface with one treatment?

Dr John A Donovan, Butte, Mont A marked feature of these papers is the authors' anxiety to save tissue and to do no harm It is my experience that so much tissue is already lost that to save a little extra is immaterial Dr Verhoeff has added another method to corneal ulcer treatment, and we are grateful for an additional method, because times come when we use them all When Dr Verhoeff gave his results, however, I was disappointed I do not see that the results are better than by any other method The method of treatment by applying heat, which Dr Shahan has given us is another excellent method There is no question about the efficacy of heat The method of using it makes it a little more complicated I still stick to the electric cautery The point made by Dr Weeks of undermining the edge of the ulcer is good When using the electric cautery in making a puncture, I use the cautery point red hot, sometimes a little more, and make it deep enough to get down into the corneal tissue between healthy and diseased tissue. This will always check the ulcer, at least for a while, but in some portion of the spreading edge it may not stay checked Then I make little punctures with the cautery, having the point heated before putting it on, then to cover the ulcer I leave it at a black heat, testing the temperature on a bit of cotton, which may smoke One can accomplish everything by that method, and do it more quickly and easily Using the electric cautery, I know where the temperature is, and I find you lose as little tissue as with any other method Hundreds of cases of simple ulcer can be touched with black heat and they will heal up without apparently any scar or loss of tissue If they are bad, then you do not need to worry so much about loss of tissue, to save the eye you are fortunate The results from that treatment I think are better than those Dr Verhoeff has described for his treatment. In addition to the methods described, the injection of salt solution or mercuric cyanid solution, 1 1,000, is very beneficial It is painful As to putting patients to bed, I never put them to bed unless in severe cases, and if I see it is not beneficial I let them up

Dr Melville Black, Denver Dr Verhoeff does not have much to say about subconjunctival injections After a long experience with mercuric cyanid I insist that it is of very great value If I had an eye going to the bad from keratitis with hypopyon, I should wish it used at once I am sure that many have failed to get results from it because they have not used it right A few drops injected at intervals of a few days is worse than useless and only brings the method into discredit If results are to be obtained, from 20 to 30 minims must be injected, and the strength should be from 1 1,500 to 1 2,500 in accordance with the severity of the infection I add ⅓ grain of novocain to the dose to be injected, and if the pupil is not well dilated 1/100 grain of atropin is also added The eye is first well cocainized The needle should be pushed through the conjunctiva by a quick thrust and the latter not picked up with forceps, as they tend to tear it and allow the fluid to escape The average hypodermic syringe does not hold more than 15 minims, therefore an extra large size should be procured for these injections The novocain prevents all pain at the time of the injection and for an hour or so following The next six or eight hours there is a dull, deep ache, but it is not at all unbearable The next day there is great chemosis and lid swelling, but like the singed cat, it looks worse than it feels

Arthur G Bennett, Buffalo I want to bear testimony to the efficacy of the method spoken of by Dr Starr In Buffalo we have a great many ulcers to deal with, and covering the cornea with a conjunctival flap has in our hands acted most admirably I have seen the most desperate cases, cases that I did not think could be saved, make the most wonderful recoveries under the flap The point Dr Starr makes is that you must keep it covered for a considerable time The stitches will have a tendency to break away, but it is not difficult to put in a reenforcing stitch which will hold it for about seven days It is not always necessary to keep it in position for seven days, for I have seen the con junctiva adhere to the ulcer That appears to be a complication which one would think would give an eye with a dense leukoma, but in a case treated about a year ago in which the conjunctiva became adherent to the ulcer after the process had ceased I divided the conjunctiva from above the ulcer, and then after the eye had quieted down, simply stripped the conjunctiva off with a remarkably clear cornea That was a most desperate case The ulcer was advancing From the size of 1 mm one day it had almost entirely covered the cornea the next day That case Dr Starr saw afterward with almost a clear cornea My success with optochin has been greater than Dr Verhoeff says his has been I think it is good

Dr R L Randolph Baltimore My experience with this variety of corneal ulcer has not been very extensive yet I see cases now and again I do not regard the mere presence of exudate in the anterior chamber as necessarily serious factor, as Dr Weeks has said this exudate is usually sterile Touching the area of the ulcer with phenol in the early stage of the ulcer has given me better results than anything else Along with this measure, irrigations with normal salt solution are very valuable The irrigation should be directed exactly to the spot and this can be done best by erecting over the patient (on his back) a drop bottle such as we use in the laboratory when making sections with the microtome These instillations should be made every hour and should last five minutes at a time. Atropin of course is always demanded The use of phenol then and frequent irrigations with salt solution at body temperature constitute the treatment I have never been at all satisfied with the use of heat in these cases and have been disappointed with the galvanocautery In my experience a pressure bandage acts admirably, exactly how I am unable to say It may help the nutrition and circulation of the eye and in this way promote the more rapid disappearance of the exudate in the anterior chamber

Dr. S Lewis Ziegler Philadelphia I am glad to learn from Dr Verhoeff's investigations that a form of iodin can be applied to the eye without causing pain I have used Lugol s solution internally in exophthalmic goiter with success but I have never applied it locally Tincture of iodin is extremely painful when applied to the cornea A patient some years ago stated that tincture of iodin had been applied to his eye once but that he would shoot the next man who would use it. Naturally I did not apply it The serum treatment has proved successful in certain cases in my hands, but not sufficiently so to depend on For many years we relied on the Saemisch incision Seeing a number of adhesions and a certain weakening of the cornea in large sloughs, led me to try peripheral paracentesis, which gave the same effect I think it is really the flaccidity of the cornea which has a great deal to do with stopping the suppurative process Following paracentesis we could obtain if you choose the removal of the hypopyon as a coagulum either with the Graefe dressing forceps or the Schmidt spoon forceps, and follow this with irrigation.

Speaking of Dr Shahan's method I have used heat only in the form of the heated cautery point, sometimes applied directly and sometimes applied as radiant heat, that is, not in contact. After cauterization I use the method Dr Weeks spoke of applying a solution of formaldehyd, not stronger, however than 3 per cent., usually 1 per cent. with a small pledget of cotton wound tightly on the end of an applicator, wetting it with the formaldehyd solution and removing the excess of moisture so that it will not spread to healthy tissue The formaldehyd is then rubbed into the sloughing cornea until the ulcer is thoroughly macerated The eye is then washed with boric acid solution This method is just as applicable to corneal ulcer when you do not make a cauterization I prefer to use it after cauterization, because the resulting scar is reduced and modified by the application of the formaldehyd in fact, there is always less scarring when formaldehyd solution is used Another point that might be mentioned is that a great many cases of sloughing keratitis even after traumatism are due to infection from the tear duct The cause should therefore, be removed It has been my habit to stretch the tear duct by rapid dilatation in order to promote drainage and to prevent recurrence of the infection This procedure has a very marked influence on all forms of corneal ulceration due to lacrimal lesions

Dr F Park Lewis, Buffalo In the first place, the desideratum we all have in view is simplicity of apparatus with efficiency I believe that one of the added elements in the use of heat is the desiccation that comes from it I have therefore used superheated air by which one gets as nearly as possible the temperature Dr Shahan thinks most desirable After a good deal of experimentation to get an apparatus to get the air at the right temperature I found that such an instrument had been made for the rhinologists It is simply a rheostat which can be attached to the air tank and a gradation of the heat obtained as you choose and the superheated air directed on the infected area. In that way we not only sterilize the point covered, but it goes deeper into the tissues as Dr Weeks pointed out, under the overlapping edge and into the layers of the cornea, and the heat can penetrate without destruction of tissue I have found its use in this way has in many cases produced results which no other method gives

Dr. L Webster Fox Philadelphia I have been listening for the name of one of California's pioneers in ophthalmology who applied heat in corneal ulcers—Dr Barkan He introduced this procedure many years ago and it has been followed by operators in all parts of the world I have tried all the things that have been promulgated and have found them of value each and every one There is one additional drug that I am going to add from the dentists and that is trichloracetic acid I have used it in 1 2 3 and 10 per cent solution and it has been one of the most valuable adjuncts It is not exceedingly penetrating but has penetrating power to find its way into the spaces of von Recklinghausen where the cocci find lodgment and break down the tissue I am sure if you will use it in 1 to 30 per cent you will find it most valuable and as a means of driving away hypopyon it is one of the most useful drugs I know of As to heat I have tried Prince s method I found it was not as satisfactory as we had hoped I devised a coil of platinum which we put over the ulcer, and then with five seconds on and five off every minute I thought I got good results As to the Saemisch incision if any one will read Guthrie s method of puncturing the cornea they will admit that the Saemisch wasn't the lightning stroke, but the slow, deliberate puncture with a very fine knife. You will find the description in Guthrie I have had no experience of pus flowing out and causing prolapse of the iris because in every irritation of the cornea or in an ulcer which is a terminal infection, we find the iris will contract, and where you have evidence of pus you have inflammation and the iris will not prolapse unless a great deal of force has been used in executing the counter puncture Therefore I feel if you will perform the Saemisch incision as the original man did you will have no trouble

Dr William Zentmayer Philadelphia I have had an experience with ethyl-hydrocuprein in about fifteen cases I am quite sure my results have been much better than by any other single method or better than all the other combined methods In fifteen cases I have not lost a single eye Perforation occurred in about three cases All the patients had good light perception and many had useful vision I believe that this is a good result for any method of treating pneumococcic ulcer especially the class of cases at Wills Hospital You have been told that we often get them in a desperate condition I believe optochin is worthy of further trial

Dr. Frederick H Verhoeff, Boston I think those who have criticized the visual results I have reported have failed to note that the tests were made at the time the patients were discharged from the hospital I attempted to keep track of the patients afterward but it was so difficult I gave it up I do not myself attach a great deal of importance to the visual results, but to the fact whether the ulcer was stopped in its progress For instance in some cases, although the ulcer was promptly healed, the iris was already tied down so that there was no clear space around the corneal scar Since my paper was written, some of these cases have returned for optical iridectomy and obtained useful vision

In regard to Dr Shahan's method of applying heat, it seems to me it might be effective for moderate sized ulcers, but that the resulting scar would not be less in extent than that following other methods of cauterization In large ulcers it seems to me that to kill the bacteria at the edge of the ulcer sufficient heat would have to be brought to bear to cause considerable opacity in the clear cornea As he says, sufficient heat to kill bacteria will cause permanent opacity in the rabbit's cornea This means considerable injury, because the rabbit's cornea has a greater power to clear up than the human cornea

Dr William E Shahan, St Louis Twenty-two cases have been treated by this method since December Saemisch section was not required in any, none came to enucleation, the process was stopped in all Final vision acuity depended on the size and situation of the original ulcer The scar from a small central ulcer caused a greater visual loss than that from a larger peripheral one

With ulcers larger than the largest point, the point at 158 F was applied steadily for one minute to a part of the ulcer, then reheated and applied to another part, until all the ulcer had had a continuous application for one minute

The advantage of this method of thermotherapy over all others is its exactness We can reproduce the same condition every time and soon learn precisely what to expect. Moreover, heat applied in this way affects not only the surface of the ulcer, but passes directly through the cornea into the anterior chamber This was proved by thermocouple measurements in the paper read at the Detroit session, and its practical value shown in a case of intracorneal abscess due to a perforating wound There was a pneumococcus infection with hypopyon, etc The wound closed leaving an abscess which would not heal and could not be reached by surface applications Two or three one-minute applications of heat at intervals of several days stopped all symptoms and brought about permanent cure This was a case of Dr Wiener's

The additional clouding caused by the heat can be limited accurately to the area of the ulcer and is of negligible importance as compared with an extension of the ulcer

Several of the cases cured by this method had been fruitlessly treated with optochin In fact, most of the cases had been vigorously treated by various methods before the heat treatment was applied Three rodent (Mooren) ulcers were treated by this method without any benefit This type of ulcer does not appear to be due to bacterial activity

---

Immobilization of Tuberculous Lung by Extraction of Intercostal Nerves—The *Ugeskrift for Læger* gives a summary, p 383, of an illustrated article by Warstat in the *Deutsche Zeitschrift fur Chirurgie* describing his success in excluding the tuberculous lung from participation in respiration by extracting a stretch of each intercostal nerve on that side Attempts have been made to arrest the functioning of half of the diaphragm by severing the phrenic nerve But the effect of this is restricted to the lower portion of the lung, while tuberculous processes usually are located in the upper portion The upper portion can be immobilized by paralyzing the thoracic muscles of respiration He exposes the intercostal nerves from the second to the eleventh, inclusive, his incision being along the margin of the erector spinae He cuts each nerve distal from the dorsal root, and then twists the distal end of the nerve out with forceps He applied this operation to sixteen rabbits and one dog, and when killed weeks or months later the lung was found materially reduced in size and of solid consistency The abdominal muscles did not seem to feel any effect from the operation, either in the animals or in the two clinical cases in which he has applied it In his first patient that half of the thorax did not participate at all in inspiration, and in three months was much flatter The patient's condition had improved notably by the end of six months, the tuberculous process having been unmistakably arrested There was no cavity in the second patient, and the whole set of symptoms disappeared in the course of a few months

---

CUFF OPERATION FOR NEPHROPEXY

CHARLES M McKENNA, MD
CHICAGO

A review of the literature reveals many different methods for kidney fixation It seems that thus far none has been accepted as a standardized way for this operation Albarran, a French surgeon, suggested the splitting of the capsule, and used it as a layer to make the fixation Hahn, a German, suggested the splitting of the capsule into four parts He separated the capsule longitudinally and divided it so that the upper pole and the lower pole could each be fixed by two anchors A number of various methods

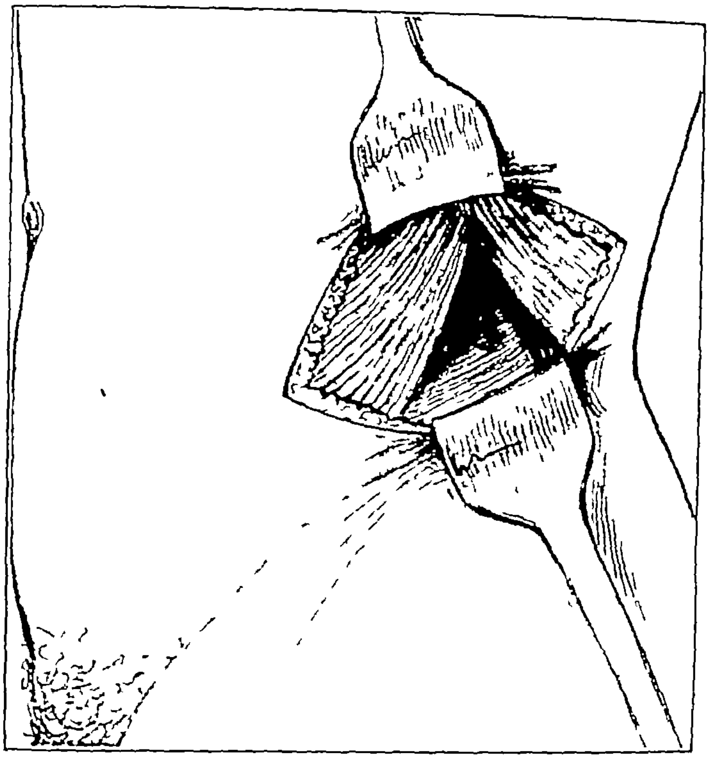


Fig 1—Full exposure of Petit's triangle

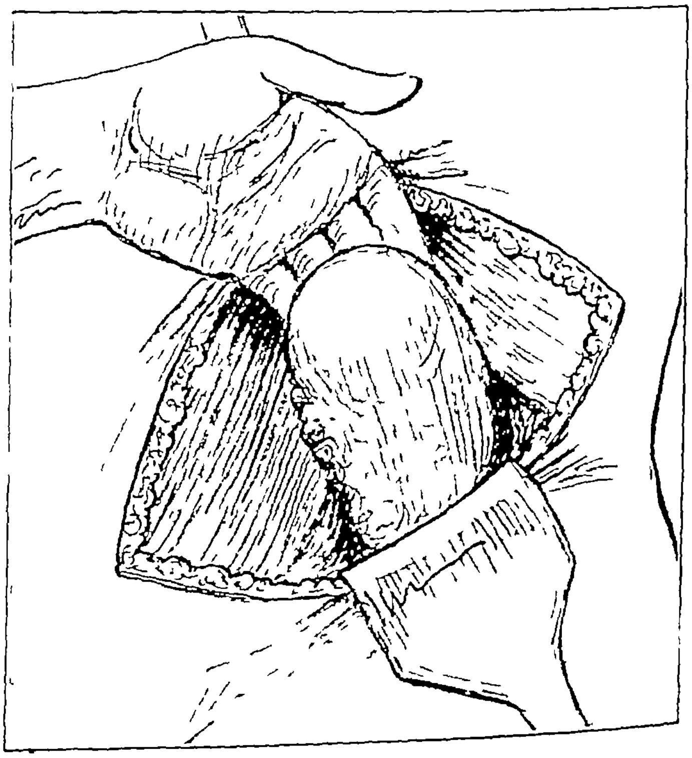


Fig 2—Easiest way to deliver kidney, upper pole first.

could be enumerated, with most of which all are familiar

The one about to be described is offered as a suggestion I have used it in a number of cases with most gratifying results Petit's triangle is divided and the kidney exposed The capsule is split from pole to pole and separated carefully on each side of the kidney down to the hilum If the capsule is fairly firm and thick, the cuff may be made out of three or four thicknesses of the capsule by folding it on itself Then a mattress suture is introduced through the capsule at both the upper and lower poles on both sides of the kidney, thus making four strong anchor points In this method, it is not necessary to decapsulate to the hilum If the capsule of the kidney is thin, and one fears that the tension would be too great on the capsule or would allow the suture to pull through or let the kidney go back to its former position, it may be necessary to fold the capsule back on both sides to a point at which they come together, this point being above and below the hilum Here a mattress suture may be inserted at both the upper and lower poles and used for the fixation, this forms a ligament

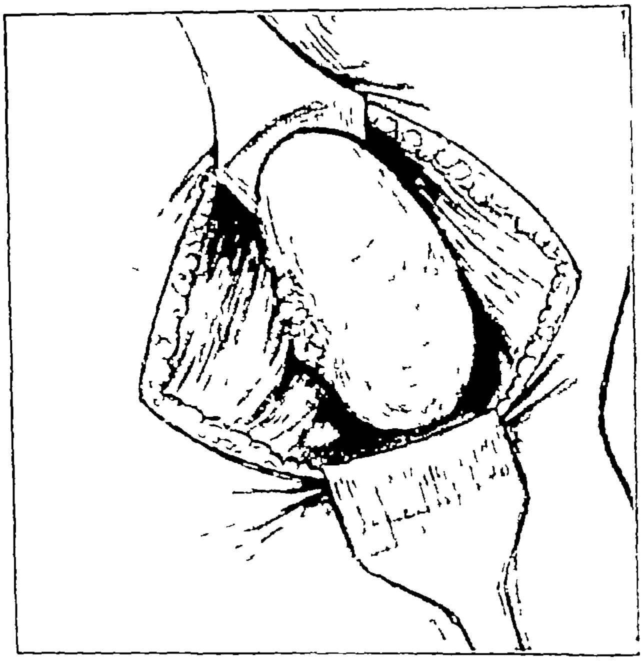


Fig 3 —Free delivery of kidney

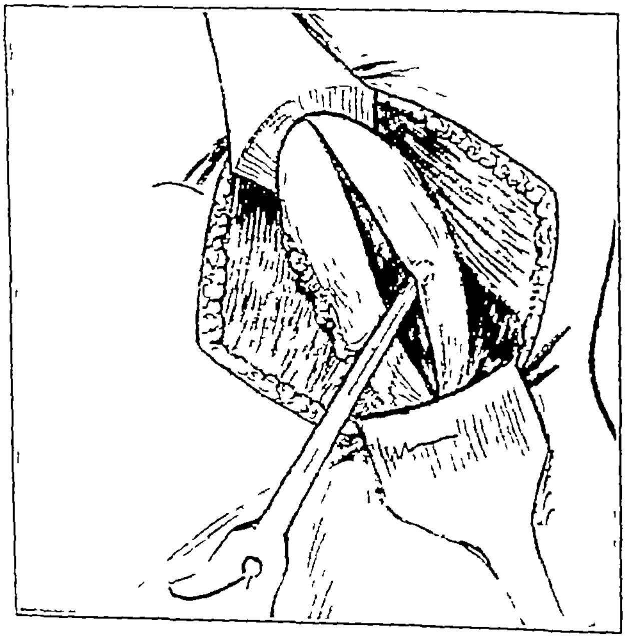


Fig 4 —Decapsulation of kidney from pole to pole

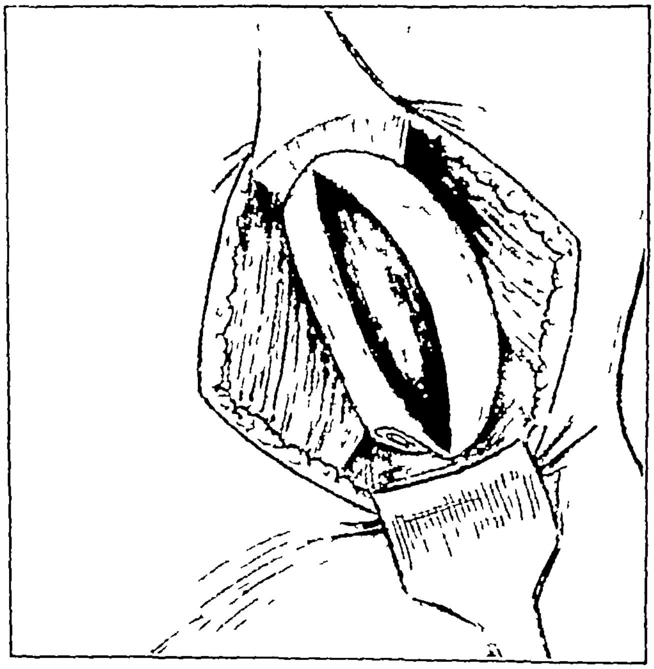


Fig 5 —Capsule folded on itself on side of kidney

It may be seen from the illustrations how thick the capsule is when the two parts are brought together, and what an effective anchorage point can be made of it with a mattress suture It will be noted that Hahn used only a single layer of the capsule Albarran also used a single layer, but used it in four distinct

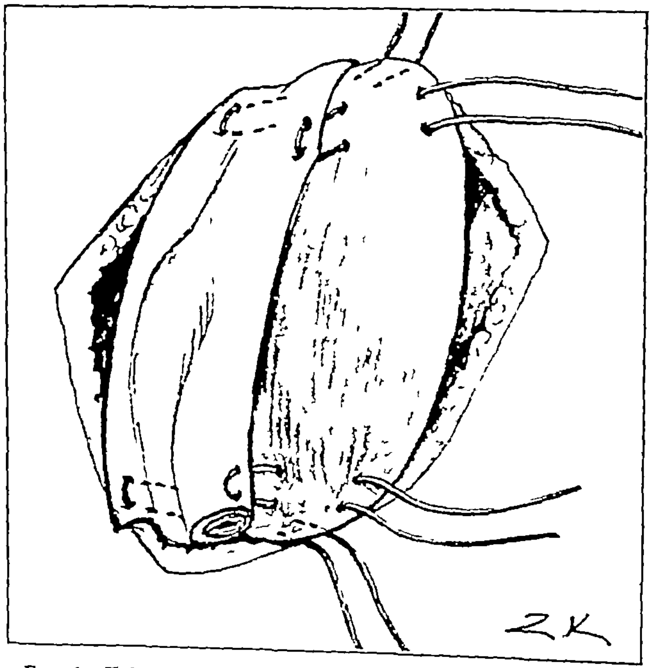


Fig 6 —Kidney capsule folded and mattress suture in place The suture could not be shown as it really is through the kidney parenchyma

anchors The particular weakness is that the sutures will either pull through, or the capsule will stretch away from the parenchyma of the kidney

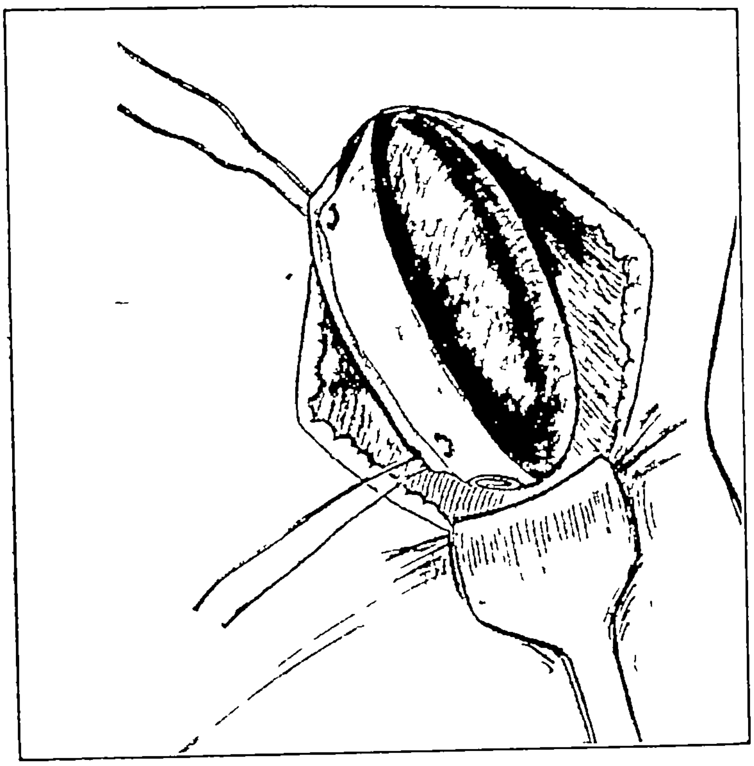


Fig 7 —Capsule denuded of both sides and brought together as a kidney ligament for fixation

The question may be raised that if a cuff operation is done, the last fold of the capsule next to the kidney would play the same part as in the operation mentioned above This question would come up only when the operation was done without completely decapsulating the kidney down to the hilum and the kidney sutures placed in the folds on each side This can be easily overcome by placing the sutures through the parenchyma of the kidney, thus holding it firmly to the kidney itself When the capsule is completely denuded as far as the hilum, there is no chance of pulling through, as the folded capsule is too thick an attachment

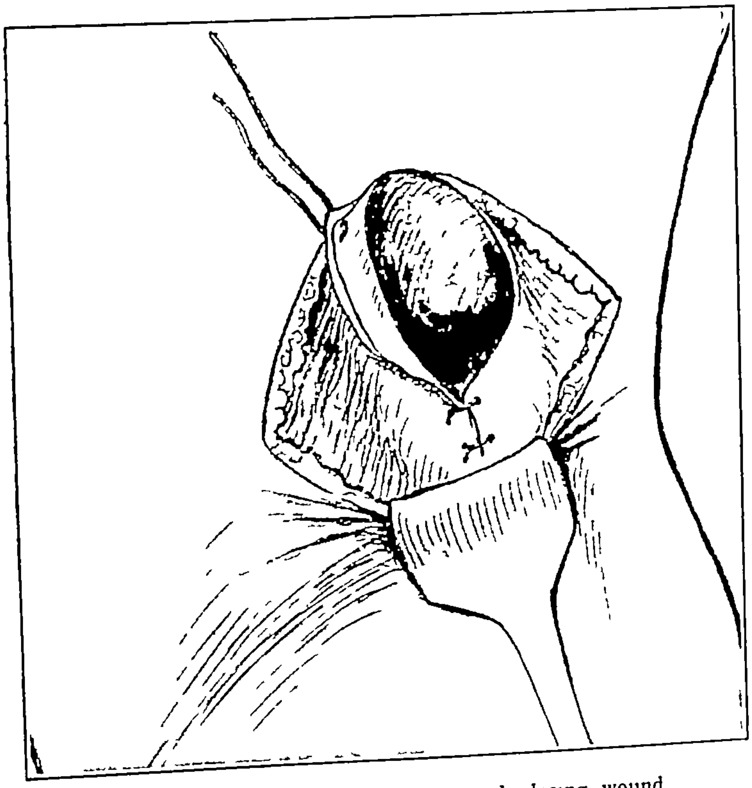


Fig 8 —Putting kidney in place and closing wound

After the kidney is put in position and the capsule ligament is sutured firmly to the muscles, the next step of the operation to be taken up is picking up the fatty capsule which has fallen away

The capsule is brought up over the denuded surface of the kidney and sutured to the muscle This reinforces the fixation by adhesions between the fatty capsule and the kidney proper The third step consists in placing one or two sutures into the peritoneum and closing the space underneath the kidney This is Swenson's suggestion Thus far we have tried the foregoing technic in six cases with good results

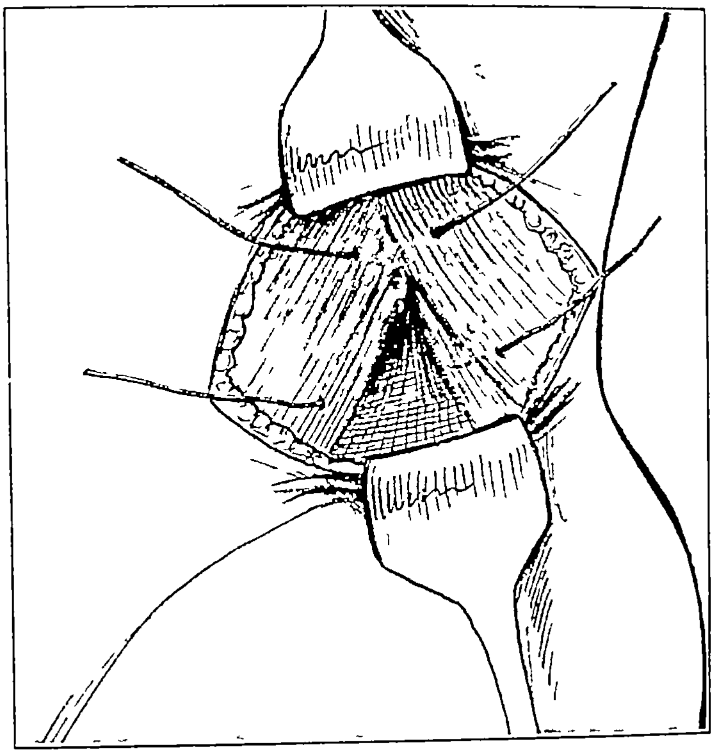


Fig 9 —An easy and simple method of closing Petit's triangle

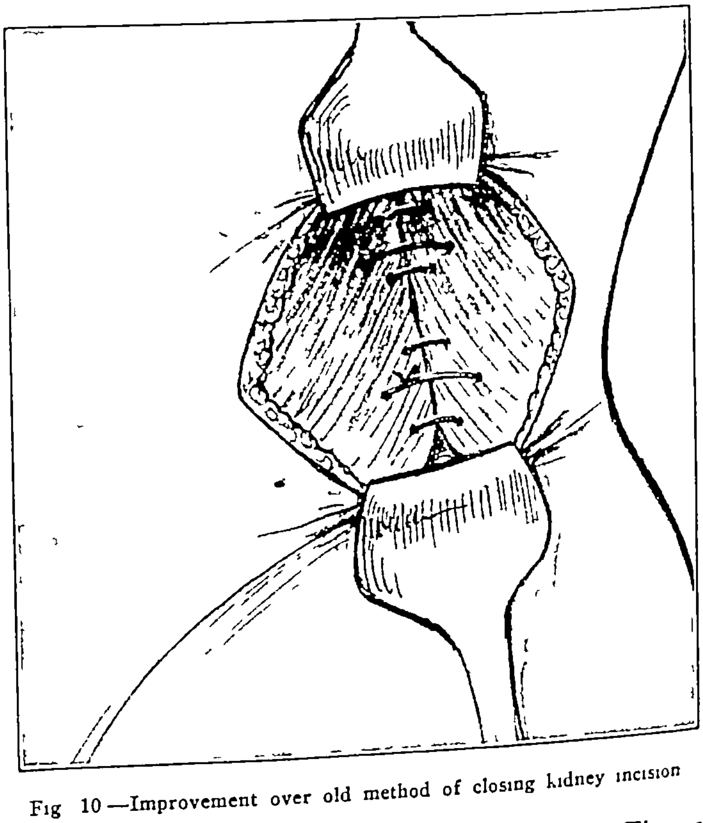


Fig 10 —Improvement over old method of closing kidney incision

The wound is then closed with three or four sutures through Petit's triangle, and the skin is closed with silkworm-gut uninterrupted sutures The patient is taken back to bed and kept in a recumbent position from ten days to two weeks At the end of this period, he is allowed to get up and walk about the hospital for three or four days until he has gained sufficient strength to be discharged It will be noted that the patient has no difficulty in walking about, and is not inconvenienced by having had the operation This is due, of course, to the method, which employs the division of Petit's triangle instead of a muscle cutting operation, which would cause the patient afterward to walk lopsidedly for some time It is much easier to deliver the kidney through this incision and make a free exposure than by the old route There is less danger of infection, since there has been scarcely any catgut used to tie off bleeding points

The Petit's triangle incision makes the operation almost bloodless The folded kidney capsule forms a ligament and makes a strong cleavage for fixation The fatty capsule brought up and tied over the denuded surface of the kidney makes a second point of anchorage

The introduction of two sutures below the kidney through the peritoneum and sutured to the muscle makes the third point of fixation

The patient is allowed to walk about in from ten days to two weeks The patient enjoys the freedom of the side which has been operated on, and suffers no untoward result This operation is done only when the kidney is well down toward the pelvis and fails to respond to other treatment

The diet after operation should be nourishing and the same as that given by the internist The patient is advised not to engage in heavy work for at least one month after the operation

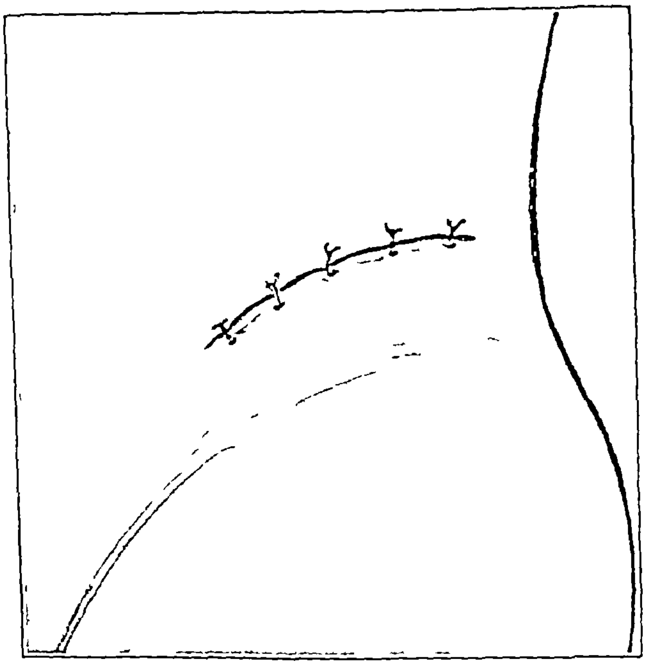


Fig 11 —Incision closed

25 East Washington Street

Handicapping the Intellectually Superior Child —As intellectually supernormal or superior, we may characterize those children whose present capacity and promise of development point to exceptional mental ability, and who are likely to become leaders in the community At present they often are as much handicapped in our schools as are their intellectually inferior companions, for whereas the latter are forced beyond the limits of their mental capacity, the former have inadequate opportunity for the expression of their powers The social importance of specialized treatment, both intellectual and manual, for this group of children is incalculably great. On them human progress chiefly depends Recently, much attention has wisely and profitably been given to the so-called feebleminded or intellectually weak. We are now beginning to see that, however important this humanitarian work may be, it is even more important that careful attention and special care be given to the intellectually superior —Robert M Yerkes *Mental Hygiene* April, 1917

OXYCEPHALUS

REPORT OF THREE CASES WITH OPERATION IN ONE *

ARTHUR J BEDELL, M D
Clinical Professor of Ophthalmology and Otology, Albany Medical College Attending Ophthalmologist and Otologist, Albany Hospital
ALBANY, N Y

That oxycephaly has existed for ages is undoubted, that the ocular changes are among the most prominent symptoms is common knowledge, but that a cranial decompression may relieve the intracranial pressure, preserve vision and enable the patient to be a self-supporting member of society is too little recognized It is to review the symptoms of three cases and to stimulate interest in this subject on the part of ophthalmologists that this communication is presented

MacKenzie[1] in 1854 seems to have been the first to attract attention to cranial deformity as a cause of blindness Friedenwald,[2] Fletcher,[3] Enslin,[4] Patry[5] and Hanotte[6] have recorded their experiences in communications of great value Within the past few months, Sharpe[7] has presented a paper clearly describing his cases and recording the results of four operations His paper should be read for the reason that only one other worker has published the report of an operation, Eiselsberg of Vienna, although Cushing has performed several operations and will soon make his report A similar proceeding has been suggested by several, but their cases were not so treated I am able to find the records of only seven operations, including the one here reported for the first time

Symptoms may pass unnoticed, but usually the headache is so severe that it attracts attention, whereupon it is found that the head is deformed and vision failing The three symptoms of this disease are such as usually to bring these cases to the ophthalmologist primarily (1) exophthalmos, (2) impairment of vision, and (3) cranial deformity

---

* Read before the Section on Ophthalmology at the Sixty Eighth Annual Session of the American Medical Association New York June 1917

* Owing to lack of space this paper is abbreviated in The Journal by omitting some of the illustrations and the bibliographic references The complete paper will appear in the Transactions of the section and in the author s reprints.

[1] MacKenzie Practical Treatise on Diseases of the Eye 1854 p 77

[2] Friedenwald Cranial Deformity and Optic Nerve Atrophy Am Jour Med Sc 1893 p 529 On Optic Nerve Atrophy Associated with Cranial Deformity Arch Ophth, 1901, p 405

[3] Fletcher On Oxycephaly, Quar Jour Med, 1910, p 385

[4] Enslin Die Augenveranderungen beim Turmschädel besonders die Sehnervenerkrankung, Arch. f Ophth. (Graefe's), 1904 p 151

[5] Patry Oxycephalie avec cornées à grand axe vertical Soc. d'ophth, Paris, March 6 1906 in Rec d ophth, 1906 p 157

[6] Hanotte Anatomie pathologique de l'oxycéphalie Thèse de Paris 1898

[7] Sharpe The Cranial Deformity of Oxycephaly Its Operative Treatment with a Report of Cases Am. Jour Med Sc., 1916 151 840

1 The exophthalmos is probably the result of the shallow orbits, and is usually accompanied by divergent strabismus and nystagmus

2 The poor vision results from secondary optic atrophy following increased cranial pressure

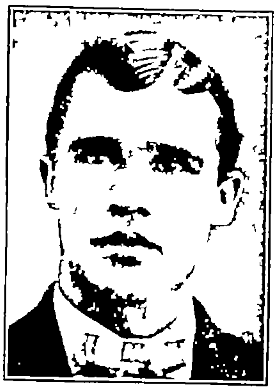


Fig 1 —Father Normal head, no divergence

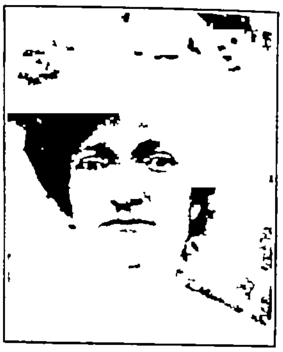


Fig 2 —Mother, marked divergence, gross facial expression

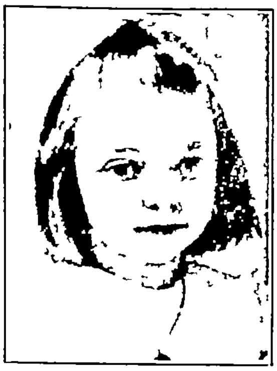


Fig 3 (Case 1) —Patient at age of 3

3 The cranial deformity is mainly shown by the high forehead and shallow orbits Roentgenograms show sulcine impressions and bulging anterior fontanel

Many other malformations, including webbed fingers and cardiac murmurs, have been noted

My experience is unique Three members of one family were afflicted, the youngest one showed optic atrophy, the middle one optic neuritis, and the oldest was free from optic nerve lesion

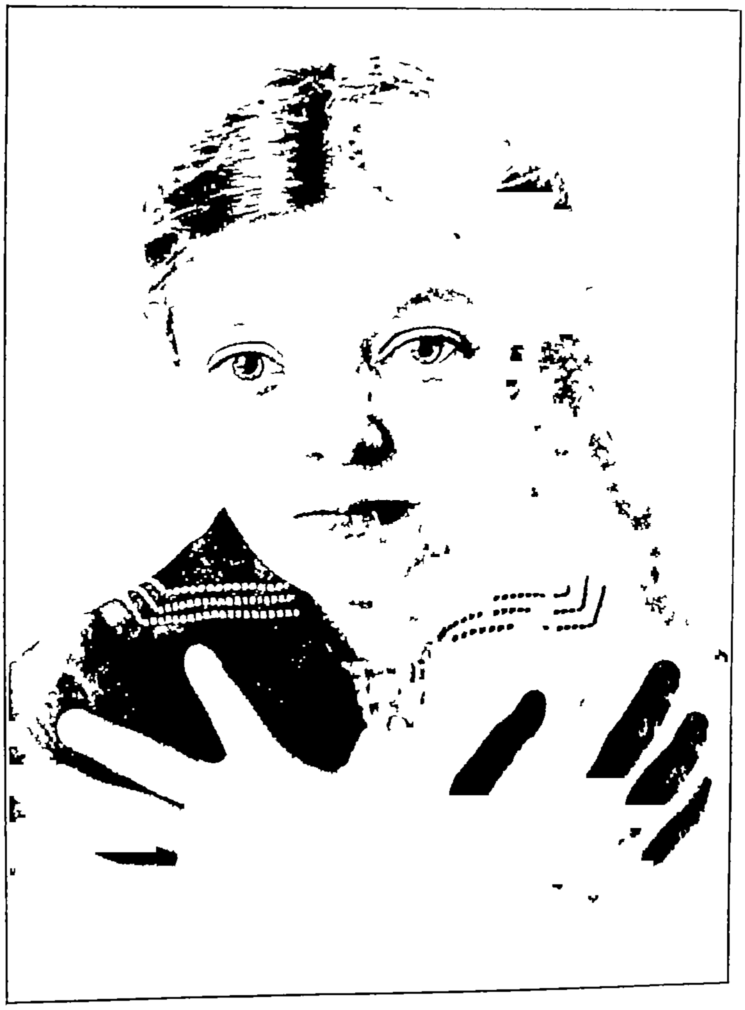


Fig 4 (Case 1) —Full face view of patient, showing normal fingers

The father of these children died at the age of 38, after having been in an insane asylum for two years Necropsy proved that he had general paresis The Wassermann reaction of his spinal fluid was positive From Figure 1 it is seen that his head was without marked change

The mother died at the age of 30, probably from acute alcoholism She was said to have had scars on her corneae, and Figure 2 shows that she had marked divergent strabismus with facial expression suggesting acromegaly

The paternal grandmother died at the age of 49, from cancer of the uterus, and the paternal grandfather at the age of 78 One uncle and four aunts are living and well The paternal great-grandparents died of old age, but it is especially noted that their heads tended to be small and the eyes closely set

The maternal history was unobtainable

The patients now recorded were all brought on the same day, Oct 17, 1916

Case 1 —A well nourished, intelligent girl, aged 11 years, with a clear skin excepting a few freckles, had normal mucous membranes, the tongue was clean, and protruded mesially with a slight tremor The teeth, of which there were twenty-five, were well kept, eleven in the upper and fourteen in the lower jaw There was a high palatal arch, the tonsils were not enlarged, the patient had chronic pharyngitis The shoulders were high, the right more so than the left, the chest was comparatively short, and the patient was round shouldered The supraclavicular and infraclavicular fossae were not depressed The chest was flattened anteroposteriorly over the upper part The circumference at the sixth rib was 59 cm, on forced expiration 57 cm, and on forced inspiration 62 cm Right side 31 cm, left side 30 cm, anteroposterior diameter 17 cm, lateral diameter 22 cm There was free and equal movement on both sides There was slight scoliosis in the upper dorsal region

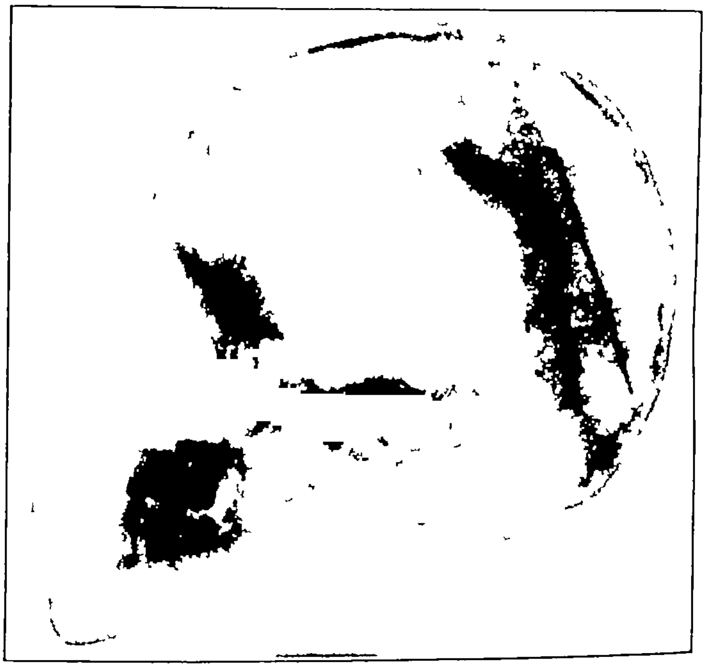


Fig 7 (Case 1) —Roentgenogram of profile, showing depressions, deep sella turcica

The heart was normal in position The apex beat was in the fifth interspace within the nipple line Palpation revealed nothing abnormal There were no abnormal pulsations or thrill, pulmonary resonance over the right side was normal, over the left side of the chest below the fourth rib, resonance was slightly impaired The respiratory murmur over both sides was normal, there were no rub and no rales The spleen and the liver were not palpable. The abdomen was 56 cm in circumference, and not prominent There were no herniae Examination of the nervous and osseous systems revealed nothing abnormal excepting that the left elbow joint resisted full extension, and when forcibly extended deflected outward with the inner condyle especially prominent.

The head was somewhat square shaped with a definite ridge over the bregma, the forehead was low The patient had abundant brown hair There were dilated superficial veins over the left frontal and temporal region The circumference was 48.5 cm. From the root of the nose to the occipital protuberance, the distance was 30 cm Biaural, 33 cm The transverse diameter was 16 5 cm.

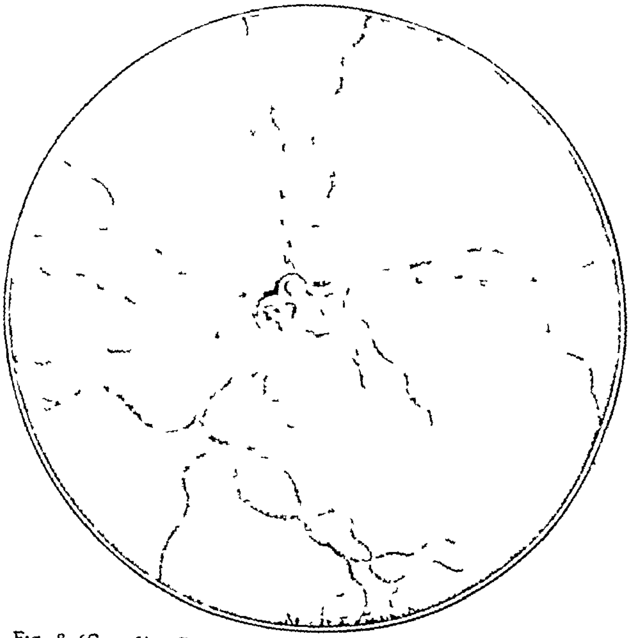


Fig 8 (Case 1)—Practically normal fundus slight indistinctness of the nasal margin of the nerve with slight increased vascularization

Right eye vision $^{20}/_{30}$ with $+ 1.25 = + .75$ ax $90 = {}^{20}/_{20}$. The pupil, about 4 5 mm was irregularly quadrate, presenting no adhesions, it was active to light and accommodation, the media were clear, the disk, with a suggestion of yellowish tinge about its margin and a small shallow central excavation was distinctly outlined Several small vessels passed from the temporal side of the nerve, at which part pigmentation was greatest. There were no pathologic changes, exudate or hemorrhage

Left eye vision $^{20}/_{30} = + 1\ 25 = + 1\ 00$ ax $105 = {}^{20}/_{20}$-1? The same irregularly quadrate 4 5 mm pupil promptly reacting to light and accommodation and the same fundus detail were observed. There were 8 degrees of exophoria. With the Hertel exophthalmometer both eyes 16 5 degrees

The only illness this patient had had was a mild attack of diphtheria when 9 years old Figure 3 shows her condition when 3 years old. Her birth was said to have been easy, not instrumental

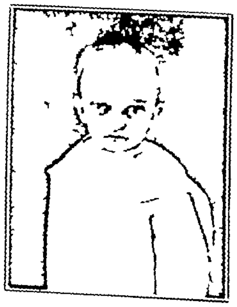


Fig 9 (Case 2)—Patient when 2 years old prominent frontal region.

CASE 2.—Boy, aged 8 years, born without difficulty not instrumental had never had any illness His head was of odd shape practically from the time of his birth. The earliest photograph taken when 2 years old revealed a peculiar face and the suggestion of frontal swelling

He was 114 cm. in height, with a dull, distant, vacant, stupid expression, and he was a decidedly noisy mouth breather The skin and mucous membranes were normal His nose was of the Roman type The palate was decidedly arched and very high The nasal septum deviated to the right the turbinates were large. The ears were negative The teeth were good, though irregular, fairly clean and not decayed, ten in the upper and twelve in the lower jaw The lower jaw protruded, with prominent lower canines The superficial veins of the neck were prominent The posterior cervical glands were palpable The chest was long narrow and rather thin with supraclavicular and infraclavicular fossae not remarkable, the interspaces were narrow, and the angle of the ribs more marked than normal The epigastric angle was very acute Breathing was of the abdominal type The chest movement was good and equal on both sides, there were no abnormal pulsations The shoulders were rounded, the scapulae prominent and the spine straight Palpation confirmed all signs of inspection There was no evidence of early rachitis The spleen and the liver were not palpable There was normal pulmonary resonance on percussion The heart outline was normal The apex beat was in the fifth intercostal space one half inch to the left of the nipple Respiratory and heart sounds were normal, there were no murmurs There were no herniae, the testicles had descended, the prepuce was adherent The osseous system was apparently normal Examination of the nervous system revealed nothing abnormal The urine was negative. Blood examination revealed hemoglobin, 95 per cent., red cells, 4,900,000, white cells, 6 300 The forehead was high, sloping upward to the vertex, with a bony ridge at the bregma The circumference measured 51 cm. From the root of the nose to the occipital protuberance the distance was 34 5 cm , from the root of the nose to the bregma, 15 cm , bitemporal, 28 cm., anteroposterior diameter, 21 5 cm , from bregma to tip of mastoid, 17.5 cm , transverse diameter, 16 cm There was an abundant growth of dark brown hair

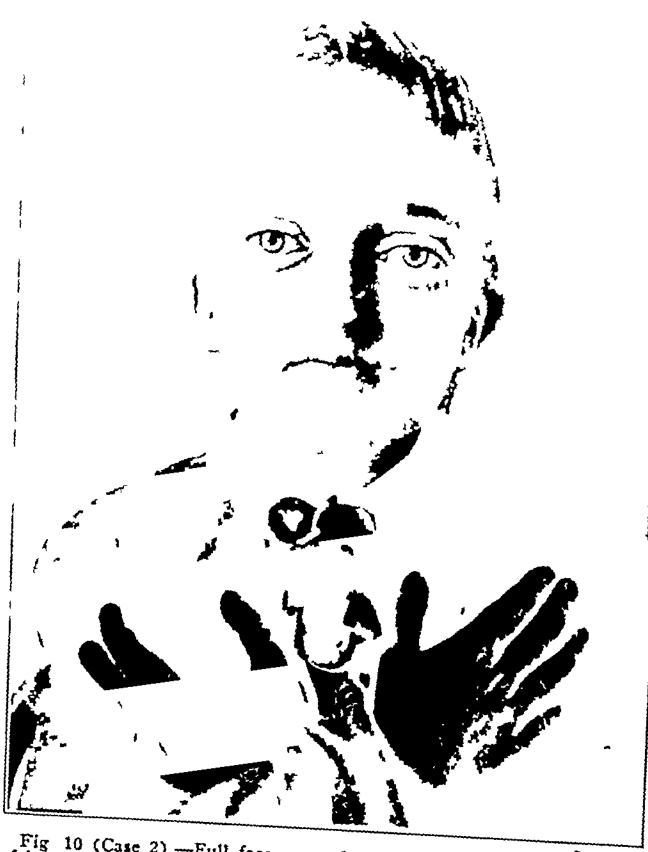


Fig 10 (Case 2)—Full face view of patient high forehead tendency of left eye outward

Right eye vision $^{20}/_{40}$ The pupil 3 5 mm., was not perfectly round because of a straight nasal margin, it reacted to light and accommodation, the media were clear, the disk irregularly round with whitish nerve head, vessels overfull in parts blurred because of the swelling of the nerve, which was + 3 00 D There were no areas of hemorrhage exudate or pigmentation a point of considerable interest in the etiologic study of the condition, for if the head in Case 2 was deformed from the beginning and the patient was only in the nerve swelling stage and the head in Case 3 did not change until after the patient was 2 years of age and she was in the optic atrophy stage, we should be forced to look for a cause in something other than just the head deformity. Furthermore, at the time of necropsy in Case 2, there was no narrowing of the optic foramina, nor were there changes about the nerve or in the dura.

Oxycephaly should be considered a condition easy of diagnosis and amenable to surgical relief.

Therapeutics

DISTURBANCES OF THE KIDNEYS

(*Concluded from page 1911*)

THE KIDNEYS IN PREGNANCY

It has long been recognized that in pregnancy the function of the kidneys is easily disturbed and that their ability to excrete properly during this period of increased metabolism is frequently more or less impaired. The circulation of the kidneys is readily disturbed by the enlarging uterine tumor. A previously loosened kidney may have its ureter twisted, and interference with the circulation of the kidney may cause passive congestion, and the appearance of albumin in the urine.

Wilson[140] has recently found that normally pregnant women begin to store nitrogen early in pregnancy, though this reserve may be used up in the puerperium and during lactation, and Werner,[141] after extensive tests, found that the functional capacity of the kidneys of healthy pregnant and parturient women is somewhat impaired. Hence any interference with kidney excretion is more dangerous in a pregnant woman than in other persons. Consequently, temporizing with an albuminuria, with or without casts, and with retained nonprotein nitrogen during pregnancy is apparently inexcusable, unless the patient is near the termination of her pregnancy, and she is under careful observation.

The thyroid gland normally hypersecretes during pregnancy. If for any reason it does not perform this office, and undersecretes, or does not secrete sufficiently for the double metabolism of mother and child, nitrogen or possibly ammonia poisoning readily occurs, and such patients may become eclamptic, although albumin or casts may not appear in the urine. When the ammonia nitrogen of the urine, which is normally about 5 per cent., reaches 16 per cent. or more, as in pernicious vomiting and consequent starvation, the uterus should be emptied unless starchy food in some form can be given and retained.

A woman who has shown a previous insufficiency of the thyroid or disturbance of the kidneys, or who has given birth to children who have shown subthyroid conditions, should receive thyroid from the beginning of a new pregnancy, the dose depending on its effect and her need for such treatment. Frequently with this careful thyroid medication such a woman will go through pregnancy normally and give birth to a normal child.

NEPHRITIS IN PREGNANCY

Of course all forms of nephritis may occur in pregnancy, owing to any of the usual causes; hence an acute nephritis or a subacute nephritis may occur, and cannot be distinguished from the same condition when due to pregnancy, or pregnancy may revive a supposedly cured nephritis. There is also no doubt that a woman who has had nephritis during pregnancy is more liable to have a recurrence in subsequent pregnancies. Some kidneys, possibly because of their position, mobility, or the position of their blood supply, are readily impaired by the abdominal pressure of the enlarging uterus. A chronic nephritis is intensified with pregnancy.

The occurrence of albuminuric retinitis in a pregnant woman is very serious, and the disturbance may be permanent, even if the uterus is immediately emptied, although the patient may completely recover.

Even if a patient with nephritis is apparently doing well and is allowed to go to normal time for labor, the exertion of labor, which throws more nitrogen, especially creatin and acids, into the circulation may cause rapid development of convulsions and coma. She is on the borderline of uremic poisoning, and the extra muscular exertion is the last straw needed to cause the uremic attack.

Nephritis may cause abortion, and the child is often born dead; but if a child is born of a seriously nephritic patient, it is liable to be anemic and of low vitality.

To summarize: albumin and casts do not occur normally in pregnant women, although they may occur accidentally, as in any other person. If they persist, the prognosis is bad. Functional tests may be made, and the nonprotein nitrogen of the blood noted, but the future is doubtful, even when all these tests are normal. At parturition, labor will often be sluggish, especially if there is edema of the parts involved. The uterus does not well contract, and postpartum hemorrhage is frequent.

While it is generally advisable to give an anesthetic so that the patient will not use her muscles so strongly and not force as much urea and creatin into her blood, the anesthetic is an added irritant to the kidneys. The period of anesthesia should, therefore, be as short as possible, and the uterus should be emptied as rapidly as possible.

If nephritis occurs early in the pregnancy there is no question of the necessity for immediate cleaning out of the uterus; postponement is dangerous. If nephritis occurs in the latter stages of pregnancy, if there is no retinitis and no anasarca, and if the circulation is good, with rest, proper diet and constant study of the nonprotein nitrogen of the blood, "watchful waiting" is permissible, but it is always a question necessitating careful decision, and consultation should be sought, to divide the responsibility. A woman with chronic nephritis should not marry, or be allowed to become pregnant if nephritis should occur after marriage.

If the symptoms do not improve after the uterus is emptied decapsulation should be considered, and should be seriously considered during eclampsia.

URINARY STASIS

This condition occurs more frequently than has been recognized, and when urine is retained, bacilluria readily follows. While normally the female bladder empties itself completely, it does not do so in many pelvic conditions This is especially true in pregnancy, which probably accounts for the frequency of genito-urinary infection during and after that condition Colon bacilli seem frequently to be found in the urine in pregnancy A pyelitis may occur during pregnancy from an ascending bladder infection or from lymphatic absorption of any pelvic infection This is one more reason for a frequent examination of the urine during pregnancy If the kidney functions are found normal, a bacilluria should immediately suggest a bladder insufficiency

---

[140] Wilson: Bull. Johns Hopkins Hosp., May, 1916.
[141] Werner: Arch. f. Gynakol., 1915, 104, No. 3.

Vesical irritation and urinary symptoms may be caused by rectal disturbances, as shown by Zobel[142]

INCONTINENCE OF URINE IN CHILDREN

This condition is generally nocturnal, although it may in some instances occur in the daytime, and is one of the most troublesome conditions to treat No treatment will be successful until the cause of the trouble in the individual case is discovered These causes may be enumerated as a long or adherent prepuce in a boy, an adherent clitoris or a vaginitis in a girl, rectal irritations, pinworms or other parasites, irritation of the skin in the genital regions, too acid or prolonged alkaline urine, bacilluria, irritations from gravel or from a calculus, bladder irritability, cystitis and pyelitis All localized skin irritations and inflammations may be either a cause or a consequence of the condition Indirect causes are digestive disturbances, overloading the little patient with rich, nitrogenous foods, or with too much water at night, disturbances caused by adenoids and enlarged tonsils, or more general disturbances, such as chorea or an unsuspected nocturnal epilepsy

This nocturnal enuresis is more frequent in boys than in girls, and may continue into childhood, even after the child has been educated to retain the urine

This affliction may cease suddenly, without any treatment whatever, or it may persist well into youth, and may even occur in maturity Many of these cases become cured at puberty, if not before, probably because of the normal development of the genito-urinary organs, and hence improved functioning or stronger sphincter of the bladder

The treatment consists of removing, if possible, all or any of the causes suggested, a proper regulation of the diet, and prohibition of coffee and tea, and of large amounts of even the simplest drinks after the evening meal Examination of the urine may suggest treatment devoted to disturbances it reveals, such as potassium citrate for hyperacidity, hexamethylenamin in bacilluria, phenyl salicylate when the urine is too alkaline or dilute hydrochloric acid, after meals If for any reason hexamethylenamin causes irritation or is not advisable, phenyl salicylate in small doses (and all dosage carefully arranged according to the age of the patient) is sometimes successful in curing a bacilluria or an increased secretion of mucus from the bladder, it may also be curative in a mild cystitis A temporary milk and cereal diet may be effective

If these treatments fail in a child who has no assignable excuse for such incontinence, atropin may be given to stop the irritability of the neck of the bladder It should be given at night, and the dose for a child aged 5 years is from $1/400$ to $1/300$ grain, given one or two hours before bedtime

Sometimes the fluidextract of ergot, given in 20 drop doses to a child aged 5 years, two or three times a day (as it seems to be a stimulant to smooth muscle fiber) may aid in increasing the power of the sphincter

Hindering a child from lying on his back by a knot tied in the sacral region, or by elevating the foot of the bed, may prevent the urine from as readily forcing itself into the posterior urethra and causing involuntary urination

At times the passage of cold sounds seems to stimulate the sphincter of the bladder to better tone Electricity, with the electrode placed so as to cause the sphincter to contract, has frequently been tried, sometimes with considerable success, the faradic current being the most valuable Various electrodes are made especially for this purpose, for insertion into the urethra or vagina or into the rectum, with a large pad for the other electrode placed over the pubis

Sometimes this troublesome condition is cured immediately and permanently by freeing adhesions of a prepuce or of a clitoris

ACUTE CYSTITIS

The cause of this condition should be sought, and if possible, removed, but it may occur without apparent cause

The treatment is rest in bed, a milk diet, the administration of alkalies in sufficient amount to cause alkalinity of the urine, and just enough morphin or belladonna to stop unendurable pain This is not often necessary Sometimes hot sitz baths are of value In simple acute cystitis such treatment is generally curative in a few days

CHRONIC CYSTITIS

This is a surgical condition with some tangible cause, and the treatment primarily is of that cause The condition is frequently not cured without more or less washing out of the bladder

---

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION W A PUCKNER, SECRETARY

LIPOIODINE-CIBA — Ethyl diiodobrassidate $C_{\,1}H_{40}I_2COO(C\,H_5)$, the ethyl ester of diiodobrassidic acid $CH_3(CH_2)_7CI\;CI(CH_2)_{11}COOH$, containing 41 per cent. of iodine

Action and Uses—Lipoiodine-Ciba is absorbed almost completely and a large percentage enters the nervous tissues The excretion is slower than with inorganic iodides, but more rapid than with other iodized fats Because of its insolubility in water and its slower absorption it is claimed that lipoiodine-Ciba is less likely to produce gastric irritation than ordinary iodides

Dosage—Lipoiodine-Ciba is supplied in the form of tablets only (see below) One to three, or in acute cases four to six, tablets, each containing 0 3 Gm of lipoiodine-Ciba are administered daily The tablets should be chewed before swallowing

Manufactured by the Society of Chemical Industry Basel Switzerland (A Klipstein & Company, New York) No U S patent or trademark.

Tablets Lipoiodine Ciba 0 3 Gm—Each tablet contains lipoiodine Ciba 0 3 Gm

Lipoiodine-Ciba crystallizes in white odorless and tasteless needles melting at 37 C It is insoluble in water slightly soluble in alcohol and very soluble in fatty oils ether and benzene Lipoiodine Ciba is decomposed by exposure to direct light

---

[142] Zobel A J Genito-Urinary Symptoms Arising from Anal, Rectal and Colonic Diseases and Vice Versa THE JOURNAL A M A, Feb 12 1916 p 496.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street . . . Chicago, Ill.

Cable Address . . . "Medic, Chicago"

Subscription price . . . Five dollars per annum in advance

Contributors, subscribers and readers will find important information on the second advertising page following the reading matter

SATURDAY, JUNE 30, 1917

ALTITUDE AND THE AVIATOR

Several years ago[1] we remarked that the conquest of the air has brought problems bordering on the field of the physiologist and the physician as well as on the domain of engineering. The unanticipated usefulness of the aeroplane in connection with the present war has given an added significance to this statement. The aviator has become an indispensable adjunct to every well organized military unit, so that his personal well-being must form a topic for consideration in military hygiene. The expression "mal des aviateurs," or aviator's sickness, has already found its way into medical literature.

The most fundamental physiologic problem with which the navigator of the upper atmosphere is concerned involves the effects of the lowered barometric pressure that comes with altitude. In a famous balloon ascent in 1871, Tissandier reached a height of more than 28,000 feet. The two companions with him perished, and the survivor barely escaped with his life. At the altitude of Pike's Peak in Colorado, many a tourist experiences intense symptoms of mountain sickness as the result of the ascent to 14,100 feet above the level of the sea, representing a barometric pressure of only 450 mm. of mercury. Distress is not uncommon at considerably lower levels.

Such facts call for a clear exposition of the unusual influences which play on the organism at higher altitudes. In an illuminating review of the effects of altitude on aviators, Henderson[2] has called attention to a possible confusion between the results of a sudden fall in atmospheric pressure, such as is the case in the production of caisson disease or diver's palsy, and the lowered barometric pressure that attends an ascent into the upper air. When a person who has been surrounded by compressed air in a diving device at the depths of the sea or in a caisson under water emerges, the nitrogen which has been dissolved in the body fluids begins to diffuse out as soon as the pressure is lowered. Henderson properly points out that this does no harm and has no effect unless the pressure under which the man has been working is so high, and the lowering of the external pressure so rapid, that the dissolved nitrogen separates in the form of bubbles. Such bubbles may form in the blood, in the synovial fluid of the joints, and even in the brain. They induce intense pain, and even paralysis and death.

What is less well understood, however, is that in order for bubbles to be formed it is essential that the pressure with which the tissues are in equilibrium should have been lowered more than half its absolute amount in a few minutes. Henderson insists that in the present state of the art of flying it is scarcely possible for an aviator to rise to a height of 20,000 feet, at which the barometer would be about half of that at sea level, in a period sufficiently short to allow bubbles of nitrogen to form in this way. The disorders from which aviators suffer, therefore, are of a different class from those to which workers in compressed air are exposed.

The respiratory difficulties of aviation, then, center in the diminished partial pressure of oxygen as the ascent is made. We are told that "by breathing a mixture of gases deficient in oxygen one can get an aviator's headache without ever leaving the ground." The dangers of rarefied air are those of oxygen deficiency. Acidosis attends the severer stages of this.

The organism responds to these unfavorable conditions of respiration in a variety of interesting ways. The acidosis induces a compensatory readjustment of respiration which increases the rate of breathing. An augmented volume of breathing subsequently ensues. In the course of more time the oxygen-carrying capacity of the blood becomes enhanced by an increment in the number of red corpuscles and its content of hemoglobin. This adaptative response has frequently been referred to in connection with the physiology of altitude.

Haldane and his collaborators have long insisted on the existence of another type of acclimatization which is of the greatest importance if it is substantiated. According to them the pressure of oxygen may be higher in the arterial blood than in the alveolar air, and at high altitudes always is. Ordinarily it is of course assumed that the respiratory gases pass so readily by diffusion through the thin cell wall of the lungs and blood vessels that complete equilibrium between the gas pressure in the alveolar air and that in the blood has occurred before the blood leaves the lung. During rest at sea level this is certainly what happens. But under the necessity established by altitude, Haldane assumes an active secretion of oxygen into the lungs. To quote his words:[4]

> At high altitudes the moist albuminous material suddenly reminds us that it is alive for it begins to do something

---

[1] The Human Body and the Conquest of the Air, editorial, The Journal A. M. A., Feb. 1, 1913, p. 371.

[2] Henderson, Yandell: Effects of Altitude on Aviators, Aviation, March, 1917, p. 145.

[4] Haldane, J. S.: Organism and Environment as Illustrated by t Physiology of Breathing, Yale University Press, 1917, p. 61.

which at once recalls living things when it delivers oxygen at a higher pressure than that at which it receives it The passage of oxygen molecules is accelerated in the inward direction, and this acceleration applies to them alone, and not to other molecules, so it is selective It does not occur in a nonliving membrane, and its presence is evidently dependent, firstly upon the peculiarities of the living membrane, and secondly upon the presence of a special stimulus acting on the membrane We know, also, that the specific peculiarities of living tissues depend upon the maintenance of their external environment Hence we can say that the acceleration depends, not only upon the factors just mentioned but upon the integrity of the general environment of the membrane—in more familiar words, upon its nutrition, temperature, etc, and upon the regulated removal of so called waste products

Henderson looks on this peculiar example of alleged vital activity on the part of the lungs under duress as paramount in gaining a mastery over the respiratory difficulties at considerable heights The practical conclusions, he says, are that if time is allowed for a gradual acclimatization, or if for some time before the ascent, mountaineers or aviators are subjected to a gradually increasing degree of oxygen deficiency, the capacity of the lungs to secrete oxygen will develop to a degree sufficient, in most cases, to afford protection against any altitude that a heavier than air machine has yet attained This point of view is worthy of serious consideration at a time when success in warfare demands that performance in every direction shall be guided by the most intelligent advice

MERCURIAL POISONING

The growing prominence of mercurial poisoning has attracted attention to the need of better therapy in the management of what is at best usually a serious situation It is not only in the rapidly increasing number of cases of suicide by mercuric chlorid that the symptoms of poisoning by this drug have forced consideration, they have been recognized as a possible complication of surgical operations and in obstetric practice ever since the more widespread introduction of mercuric chlorid a generation ago as an antiseptic agent The striking peculiarities of the course of the intoxication are not only the more immediate effects, including the initial toxic gastritis and the stomatitis when the drug is swallowed, or the subsequent intensive and often fatal ulcerative colitis, but also the later manifestations, particularly the development of a more or less complete anuria, which may persist The anuria usually arises on or about the fourth day after the poison is introduced, and the patients progress to subsequent death, from lesions of the liver or colon, with or without the reestablishment of the urinary secretion[1]

It is certainly of preeminent importance to recognize the pathogenesis of each of the series of symptoms that occur early and late in the course of the intoxication The gastro-intestinal symptoms, even when the mercury salt is absorbed from some region remote from the alimentary tract, seem to be associated, in part at least, with the efforts of the organism to excrete the poison through the channel of the bowel Mercury may be found in the stomach for several days after the introduction of the poison Hence the attempt to facilitate the removal of the latter by gastric lavage as well as uninterrupted colonic irrigations is justified on the basis of the physiologic facts now known with respect to the migrations of the metal These current procedures seem, indeed, to have attained a considerable degree of success in promoting recovery when they have been instituted early

MacNider,[2] of the Laboratory of Pharmacology at the University of North Carolina, has investigated extensively the nature of the kidney injury and the physiologic manifestations with which this seems to be associated in acute mercuric chlorid intoxications These elaborate studies show that the acute kidney injury which develops late in poisoning by mercuric chlorid does not show any dependence, in the frequency with which it occurs, on the severity of the mercury enteritis The delayed kidney injury in acute mercuric chlorid intoxications has been constantly associated with the development of an acid intoxication The severity of the damage to the cells of the convoluted tubules and the extent of fatty infiltration in the cells of the ascending limb of Henle's loop show a correlation with the degree of acid intoxication

The parellelism between these acidosis phenomena and the intensity of the symptoms in MacNider's report is as suggestive as it is marked Thus many of the animal subjects died early, in the stages of collapse attending the familiar early and intense gastro-enteritis Apparently the fatal outcome was due to the shock associated with the intense local action of the mercuric chlorid Urinary symptoms were not prominent, nor was there any depletion of the alkali reserve of the blood or any variation in the tension of the alveolar carbon dioxid to indicate a disturbance of acid-base equilibrium In the cases with the delayed symptoms, during the subsidence of the enteritis or several days after the symptoms of the enteritis had disappeared, the alkali reserve of the blood usually showed depletion Following the indications of a mild acid intoxication and an associated kidney injury, the acid-base equilibrium of the blood has gradually returned to the normal, the albumin has disappeared or has been reduced to a trace, and all of the animals have recovered In still other cases, signs of severe acid intoxication become manifest in every detail Death may even occur with typical "air hunger" With the development of an acid intoxication, the output of urine is greatly reduced or the animal is rendered anuric

---

[1] Lambert, S W and Patterson H S. Poisoning by Mercuric Chlorid and Its Treatment. Arch Int. Med., November 1915, p 865

[2] MacNider W deB A Study of the Acid Base Equilibrium of the Blood in Acute Bichloride Intoxications Proc Soc. Exper Biol and Med 1917 **14**, 140.

Evidently the causes of the more immediate and the delayed symptoms need individual consideration The danger of the acid intoxication with its necrotic effects on the kidney (and presumably other glandular organs) — results rarely seen in congested kidneys of individuals that succumb during the height of the gastro-enteritis from mercuric chlorid poisoning — gives the clue to the continued liberal use of alkaline fluids until the possibility of further harm is averted It is perhaps the alkali rather than the diuretic that saves the day

PERIODIC FUNCTIONS OF THE ORGANISM

One of the biologic manifestations of many organisms, particularly of the lower type, is a rhythm of function which expresses itself in successive alternations of activity and rest A comparable phenomenon is constantly presented to us in the performances of the heart Professor Boldyreff[1] of the University of Kasan has lately maintained that there are instances of such periodic activity of the organism heretofore unappreciated Thus, he holds that the current belief that the glands and muscles which serve the purposes of digestion and alimentation in general become quiescent as soon as the obvious work of the gastro-intestinal digestive functions is completed is erroneous Observations on man and other animals have led him to the impression that soon after digestion there occurs a new secretion of pancreatic and intestinal juices, a discharge of bile into the bowel, accompanied by periodic muscular contractions of the distinctly rhythmic character on the part of the stomach and small intestine The salivary and gastric glands are said to take no part in this "periodic function" of the remainder of the apparatus of digestion In man this glandular and muscular activity occupies more than half an hour at each onset, followed by a longer period of alimentary repose

The older ideas of a continuous secretion of some of the digestive juices were succeeded by the conclusion that no secretion whatever takes place without an appropriate chemical or nervous stimulus, usually associated with food or its digestion products If the views which find expression in Boldyreff's latest contribution are substantiated, they will establish for the secretory apparatus some of the manifestations of periodic activity which have been described, in this country by Cannon and Carlson in particular, for the muscular responses of parts of the empty alimentary tract[2] According to Boldyreff, the pancreatic juice which is thus secreted periodically is even richer in enzymes than the secretion which pours into the chyme during the digestive cycle

The statements of facts derived from the careful observation of experimental subjects must be divorced clearly from the theory which Boldyreff has constructed to interpret the phenomena He maintains that the glandular secretions discharged periodically in the nondigestive intervals are absorbed along with their dissolved enzymes from the bowel Simultaneously an increase of proteolytic and lipolytic enzymes, as well as an increment in the number of leukocytes, is said to appear in the blood A rise in temperature also attends these phenomena, so that, quoting Boldyreff, one is justified in speaking of the existence of a "periodic functioning of the entire organism," and not merely a rhythm of the digestive apparatus

What physiologic use can such activities serve? According to Boldyreff's hypothesis, by distributing suitable reabsorbed enzymes at appropriate intervals to all parts of the organism they furnish the tissue cells with indispensable factors for the assimilation, that is, the breaking down or building up, of proteins, fats and carbohydrates In other words, the pancreas thus indirectly becomes a prominent agent in the cellular metabolism

It is untimely to follow the Russian physiologist farther into the consequences which may be drawn from his unique hypothesis It will be observed that what has long been recognized as essentially a digestive function of the pancreas is converted in turn into the source of an "internal secretion" whereby the activities of the gland extend their efforts within distant tissue cells The theory of the reabsorption of pancreatic enzymes paves the way for many deductions applicable to clinical diagnosis and therapy All of these will be far fetched, however, until the justification for the underlying hypothesis is more rigorously examined

CLIMATE AND HUMAN LIFE

Medical climatology, which deals with the hygienic effects primarily associated with the geographic location of a region or attributable to it, is still far from being anything like an exact science Many of the health-controlling factors formerly ascribed to the residence of persons or races in special parts of the earth are now known to be incident to causes other than those dependent on what may properly be called climate Thus the once magnified dangers of the tropical climate have been minimized in many respects by the recognition of their dependence on remediable conditions The meteorologic difficulties and the upsets in the heat regulation and comfort of the individual have been largely overcome by the introduction of suitable modes of clothing, by appropriate distribution of the periods of rest and work, and by other personal adjustments The menace of tropical diseases has been met by the measures of sanitary science and preventive medicine The beneficent effects of such innovations have become apparent in the more favorable mortality statistics of places in which the hygiene of today has found a footing.

---

[1] Boldyreff, W Fonction periodique de l'organisme chez l'homme et les animaux d'ordre superieur (pancréas comme principal agent du processus de l'assimilation dans tout le corps), Quart Jour Physiol, 1916, **10**, 175

[2] The Stomach in Hunger, editorial, The Journal A. M A., Feb 8, 1913, p 448, The Gastric Movements in Hunger, Sept 27, 1913, p 1044

Nevertheless there is a widespread conviction that human efficiency is best exemplified in the more temperate zones and that a deadening lethargy is the ultimate consequence of prolonged residence in the hot countries. In view of this there is a peculiar interest in the recent studies of Ellsworth Huntington[1] directed to a more exact determination of climatic optima for man. He has selected for his preliminary investigation the relation of temperature to the death rate, the amount of work done by piece workers in factories, and the strength of persons as measured by the dynamometer.

Obviously there are many interfering variables which may upset the validity of statistics for particular regions. Local differences arise from humidity, epidemics, the seasons at which vacations are taken so that the data for population become less accurate, and other minor causes. Despite this, however, the averages of optimum temperature on the basis of the death rate in four groups, namely, northern, central and southern cities of the United States, and six foreign countries differ surprisingly little, the range being only from 62.7 to 65.8 F. This seems to indicate, according to Huntington's interpretation, that whether we are dealing with northwestern Europe, the northern, central or southern United States, or an Asiatic country such as Japan deaths are least numerous at about the same temperature. When allowance is made for the effect of summer vacations in the American cities, it appears that the optimum is probably about 63 F. Since we are dealing with the mean temperature of day and night, such an optimum means that man is physically at his best when the temperature rises to about 70 at noon, but not when it stays all day at that level.

Likewise the factory work of thousands of persons, as shown by Huntington's statistics, points to the same temperature as the best for human activity. Tests of the strength of individuals suggest a slightly lower optimum, at about 60, but the number of cases is small. The investigations of Rosenau and Thompson also indicate an optimum at 62 or 63. Since Finns, Japanese, Germans and Americans all show essentially the same response, Huntington adds, it seems probable that the optimum temperature for physical activity among people in all sorts of climates does not vary far from 63 F. Even a long residence in a given climate apparently has little effect in causing people to become adjusted to their environment. The Finn still seems to find his climate always too cool, while the Cuban finds his too warm.

It might naturally be supposed that in the process of evolution an adjustment of races to their temperature environment had taken place. From the new statistics the negroes, indeed, seem to be at their best at a temperature 4 or 5 degrees F higher than that which is best for white people. In Huntington's estimate, however, this is insignificant in comparison with the difference of 10 degrees between the mean temperature of the Baltic home in which the white race probably developed and the African home of the negroes. Moreover, the average optimum temperature in northern, middle and southern cities is almost identical. One can thus appreciate the intent of Huntington's conclusions. There is not the slightest hint, he writes, that either the white or the colored people by residing in the north or the south have become adjusted to a particular temperature. So far as these facts go, therefore, they suggest that man's adaptation to temperature is so deep seated and of such remote origin that it changes very slowly. Untold thousands of years of the contrasted environments of northwestern Europe and central Africa appear to have produced a permanent racial difference of no more than 5 degrees, and possibly less, while the short time that the American people have been in their surroundings appears to have caused no differentiation.

Current Comment

THE WAR AND SCIENTIFIC INVESTIGATION

The commendable patriotic ambition of every right-minded American to render his best help in the time of his country's need has raised questions of choice for many citizens. The spirit of service is rife throughout the country, and one's first impulse frequently urges him to enter those avenues of activity that lead nearest to the combat. A sane, calm review of the situation indicates, however, that there are many fields which require profound attention, even though they often seem quite remote from the trenches. The chemist in the munitions works, the bacteriologist who is testing the efficiency of the latest antiseptics, the agriculturist who is striving to solve the immediate difficulties of farm practice or aiding in the "speeding up" of the production of staple crops, live stock and other food products — all of these workers are an indispensable part of the great human organization that must cooperate to lead the way to victory. Frequently many workers, particularly younger men engaged in important investigations, gain the uncomfortable feeling that they are not doing their full duty when they plod along so far removed from the noise of the conflict. Such persons need encouragement at the present moment. They must not all be permitted to withdraw from the less conspicuous though highly important labor of productive investigation which may anticipate the needs of the hour. The war has already directed attention as never before to the intimate relations between science and industry, as well as to the vital necessity of fostering these relationships.[1] Two generations ago, Dr. Lyon

---

[1] Huntington Ellsworth Temperature Optima for Human Energy, Proc Nat. Acad Sc 1917 3, 127

[1] See for example The Experiment Stations and the War Expt. Sta. Record 1917 36, 601

Playfair deplored the holding "to mere experience as the sheet anchor of the country, forgetful that the molds in which it was cast are of antique shape, and ignorant that new currents have swept away the sand which formerly held it fast, so that we are in imminent risk of being drifted ashore " Despite the brief period full of the enormous difficulties of organizing a great military campaign and instituting active defenses as well as naval warfare, substantial headway has already been made in the mobilization of scientific investigation Researches cannot be manufactured on command or completed over night Nevertheless the National Research Council has already made a commendable beginning in a movement that will enlist some of the best scientific minds of the nation and encourage them to continue the work for which they are specially trained and best equipped In our enthusiasm for the more apparent helps to success we must not forget these potent silent forces, nor allow the leaders of the nation to overlook the need of supporting and stimulating them Even war thrives through the fundamental discoveries of science

WILL CANADA TOLERATE TANLAC?

Tanlac, the latest "patent medicine" success of the "bracer" type, is "to be introduced in Canada " It was inevitable With practically nation-wide prohibition in the Dominion the shrewd exploiters of this alcoholic nostrum were bound to have their attention drawn from the arid regions of the southern United States to our northern neighbors In introducing Tanlac through Toronto newspapers it is emphasized that the Tanlac concern is going to erect a plant in Canada Half-page advertisements in metropolitan dailies advise Canadians that 7 000,000 bottles of Tanlac have been sold in two years Telegrams are reproduced from druggists in cities and towns of the southern states showing that the stuff is ordered in carload lots — and a carload consists, according to the same advertisements, of 12,720 bottles! Tanlac has all the qualifications for a successful "patent medicine" enough alcohol (about four times that found in beer) to give it a decided "kick," plus bitters and not too much laxative To the thoughtful it must seem little less than a crime that the Dominion of Canada, staggering under the financial burdens thrown on it by the war, should be further subjected to the monstrous waste represented in the sale of such products as Tanlac Canadian druggists and Canadian newspaper owners will be direct beneficiaries of the sale of Tanlac The Dominion as a whole will be a distinct loser, financially and physically Yet, we venture to say that there is not an intelligent druggist in Canada (or in the United States either) but knows in his heart that Tanlac is a piece of unmitigated quackery, and there is not, we are sure, a newspaper publisher in the entire Dominion (or in the United States) who, if his family were sick, would attempt to rely on Tanlac "Seven Million Bottles Sold in Two Years" — and it sells for a dollar a bottle! Seven million dollars taken from the pockets of a class that can least afford it — and one third of this sum goes to the retailer! Does Canada wish to drain further her financial and physical resources for no other purpose than putting a certain amount of money in the pockets of Canadian druggists and newspaper publishers and a much greater amount in the pockets of an Ohio quack? If not, she will not tolerate Tanlac

"THE DOCTOR DASHED HIS HOPES"

Apropos of our comment "Physicians on the Exemption Boards," the New York *Times* for June 23, under the above caption, relates how a New York physician had had under treatment a young man who was suffering from some minor ailments but not severely or from maladies easily diagnosed The young man was apprehensive that the surgeon into whose hands he might come for selective draft might not discover what he pretended to regard as a serious condition, and therefore wrote to his own physician and asked for what would virtually be a certificate of physical disability His physician's reply was to the effect that he was determined not to give any such certificates to any one, but to let the regularly appointed examining board assume the responsibility, he being confident that these boards would not pass for enlistment persons incapable of service "In addition, the doctor told his patient — who must have been sadly disquieted thereby — that 'so far as your particular case is concerned, I am not at all sure that you might not be very much benefited by a course of good, rugged training in some camp,' and then he proceeded to point out that the patient's professional work had been such as would specially qualify him for certain duties of much value in modern warfare" Another instance of this form of "preparedness" has been called to our attention A mother who evidently thought her son too precious to be a soldier recently related to a neighbor, in confidence, that she had taken her son to several specialists and had finally secured certificates that would keep her boy at home, giving a hint to her neighbor, who also had a son, that she could do likewise It is not at all improbable that a large amount of petty "preparedness" of this character is going on

PHYSICIANS ON THE EXEMPTION BOARDS

By the time this issue of The Journal reaches its readers thousands of civilian physicians will have been appointed on the local Exemption Boards which are composed of two laymen and one physician As regulations governing the jurisdiction of these boards have not been promulgated by the Provost-Marshal's Office at this writing, the details of the duties of the members of these boards are not known We do know, though, that on the medical member will rest the major part of the responsibility of deciding whether claims for exemption on account of physical disability are just Considering the fact that the members of a board must be residents of the district over which it has jurisdiction, the position of the medical member will not be an enviable one He will have to resist the pleas not only of his friends and neighbors, but also of his patients, which may mean loss of practice if some instances Even bribery may be attempted To resist these importunities will simply require common honesty of purpose and the ordinary courage to do one's duty All kinds of schemes will probably be attempted to mislead the physician Malingering will be practiced in its perfection, young men may present certificates from the family physician certifying to physical disability, similar certificates will be presented from specialists who have through thoughtlessness accepted the statements of parents or others without verification by critical examination The duties of physicians on these boards, therefore, require not only honesty of purpose and courage to do right, even at the sacrifice of private practice, but also professional alertness to detect the various forms of malingering and misrepresentation that will be attempted

---

BILLINGS COMMISSION TO RUSSIA

As announced in the next column, a commission under the chairmanship of Dr Frank Billings of Chicago is about to leave for Russia This body of men goes as a military commission under the War Council of the American National Red Cross As will be noticed, the list of members includes specialists in sanitary science, general medicine, tuberculosis, bacteriology, and other branches of medicine, engineering, on foods, transportation, business, etc, as well as stenographers, moving picture operators, interpreters and other attaches The object of the commission is to make a general survey of the needs of Russia, military and civil, what the conditions and needs are as regards physicians, nurses, medical and surgical supplies, ambulances, motor trucks, etc, and to investigate sanitary conditions in all their phases, as well as business and social conditions in their broadest aspects There are many problems in Russia which need solving and which this commission will investigate As an example of serious practical problems is the fact that in parts of Russia there are millions of tons of wheat in stock, and have been for years, while in other parts people are starving for the need of this food The reason probably is the lack of transportation, but there may be many other underlying causes peculiar to Russia that account for such condition The central idea — the principal object — of this commission is to show that America, the oldest republic, is in hearty sympathy with Russia, the newest republic, and desires to show that sympathy with material and tangible help and with such cooperation as may be needed The probability is that this commission will extend its survey to Roumania, if necessary We understand that Mr William B Thompson of New York, who had already given a quarter of a million dollars to the Red Cross, is assuming all the expense connected with this commission

---

Why Living Organisms Must Die—The question why living organisms should die is a biological question just as truly as is the question why or how they live. Evolution could not take place without death, because the higher forms of life are so specialized that they cannot change much in a single lifetime Death, therefore, is an adaptation for the benefit of the species—F H. Pike *Jour Heredity* May, 1917

Medical Mobilization and the War

A Red Cross Commission to Russia

A commission of sanitary, social, medical and food distribution experts has been appointed to proceed at once to Russia under the auspices of the Red Cross to make a survey of the social needs of the people, particularly as to sanitary and health problems This commission is headed by Dr Frank Billings Chicago Dr William S Thayer, professor of clinical medicine in Baltimore, and Dr Wilber E Post, assistant professor of medicine at Rush Medical College, will investigate the general medical problems which may arise Dr D J McCarthy Philadelphia, will act as tuberculosis expert Mr Harold H Swift of Swift and Company, Chicago, goes as the food expert of the commission, and Prof Henry C Sherman professor of food chemistry, Columbia University, New York will have charge of the scientific aspects of the food problem Prof George C. Whipple, professor of sanitary engineering, Harvard University, Prof C E. A Winslow, professor of public health at Yale University and Dr Malcolm Pirnie, assistant to Professor Winslow, will be concerned with the sanitary and hygienic problems Mr Raymond Robins, Chicago, will investigate sociologic questions, representing the social labor group Dr William Groh Philadelphia, is medical attache and Dr O F Whitman of New York will act as moving picture director The business director of the commission will be William B Thompson, banker of New York City Among the remaining personnel are Allen Wardwell, New York, secretary, James W Andrews New York, treasurer, H F Brown, New York, publicity, Henry J Horne, New York, transportation, William C. Nicholson, Chicago, secretary to Mr Swift, Thomas B Thatcher, New York, secretary to Mr Thompson, Robert I Barr, New York, assistant to Mr Thompson, William Cochran, New York, assistant to Mr Horne, Cornelius Callaher, New York stenographer to Mr Thompson, Harry B Redfield, New York, stenographer, Harold M Wycoff, New York motion picture operator, Lawrence C. Houghteling, Chicago, attache There will also be several attaches who are versed in the languages of the far east as well as in Russian, French and German, valets etc. The commission leaves Chicago, *June 30*, and a Pacific port during next week

---

Overseas Forces to Be Vaccinated Against Paratyphoid Fever

In addition to the vaccination against typhoid fever prescribed by the War Department, all officers and enlisted men of the United States Army and all other persons associated with the military forces of the United States, designated for service overseas, are to be completely vaccinated against paratyphoid fever prior to their arrival in Europe The vaccination against paratyphoid fever will be given in the same manner, in the same dosage and with the same intervals as are now prescribed for the vaccination against typhoid fever The only vaccine used for this purpose will be the mixed paratyphoid "A" and paratyphoid "B" vaccine prepared in the Army Medical School, Washington, D C.

Commission Not a Commission Until Accepted

Regularly commissioned officers of the Medical Reserve Corps were exempt from registration and are therefore exempt from conscription This exemption will apply also to those officers of the Reserve Corps who have been commissioned since the day of registration But it must be remembered that no one is regarded as commissioned until he has completed his enlistment by formally accepting the commission and forwarding to the Adjutant General's Office his acceptance with a signed oath of allegiance. To represent oneself as commissioned in any department of the government service before regularly accepting a commission is definitely an act of misrepresentation

---

Sons of Dr Victor C Vaughan Leave for Duty Abroad

Major J Welles Vaughan and Capt. Victor C. Vaughan, Jr, sons of Major Victor C Vaughan, dean of the University of Michigan, Medical School, left for duty abroad last week. Major J W Vaughan has had previous military experience, as he served on the Mexican border for three months during 1916

The Royal Society of Medicine Offers Gratuitous Fellowship to Visiting American Physicians

To the Editor —We are anxious to let it be known as widely as possible that we offer the heartiest welcome to the American doctors who are coming over to help in the war During their stay on this side we offer them all the privileges of Fellowship gratuitously We have the finest medical library in this country, and many comforts in the house which make it almost a club, and nothing would please us better than to see it crowded with our American friends I have communicated this to some of the leading doctors who have already arrived and gone to France, and have sent cards like the enclosed to your embassy and consulate, but I still find, when I meet some of your doctors socially, that they have not heard of our offer, and I should be very grateful if you would take an opportunity of calling attention to it in your pages J Y W MacAlister, Secretary

The Royal Society of Medicine, 1 Wimpole Street, London, W

The following special notice has been issued

The council of this society offers a cordial invitation to the commissioned officers of all the naval and military medical services, when in London, to make free use of the society's rooms (which include writing, conference, smoking, tea, and dressing rooms) and to use the library for reading and reference They are also welcome to attend the meetings which are held for the reading of papers, clinical demonstrations, and for discussions These are announced in the weekly medical journals The society's house is open every day except *Sunday* from 11 a m to 6 30 p m.

The Royal Society of Medicine.

Promotions in the Army Medical Corps

During the past two weeks the Surgeon General's Office has been preparing lists showing the changes in the Medical Corps which will result in the addition of the four remaining increments to this branch of the service It can be officially forecast that the 102 first lieutenants of the regular Medical Corps now on the rolls will be made captains The House of Representatives, during the past week, passed a bill which will enable the Surgeon General's Office to promote medical officers from first lieutenants to captains before the term of five years, during which a medical officer ordinarily serves as first lieutenant, has elapsed

Physical Qualifications for Medical Officers

A Pennsylvania physician writes "I have been hearing from many sources of the severity of physical examination of men applying for commission in the Medical Reserve Corps, and I would like very much to know whether a condition that I have at present, i e, deviated nasal septum and hypertrophied turbinates, would be considered as cause for rejection"

Answer.—According to G O No 66, W D, 1910, "Rules for the Examination of Recruits"

> "Nasal obstruction due to septal deviation, hypertrophic rhinitis, or other causes, if irremediable and sufficient to produce mouth breathing, is cause for rejection Nasal polypi, when operable and not associated with sinus disease, are not disqualifying"

Qualifications for Service on Exemption Boards

Several queries have been received as to the qualifications for appointment as physician on exemption boards, especially whether the physician must be a member of the Medical Reserve Corps in order to obtain such an appointment. Exemption boards consist of three or more members, none of whom can be connected with the military establishment Therefore no officer of the Medical Reserve Corps is eligible for appointment to these boards Physicians who have been appointed on the boards are not officers of the Medical Reserve Corps

Prevention of Infectious Diseases

A conference of health experts summoned by Dr Simon Flexner, director of the Rockefeller Institute, New York, was held in New York, June 5, to prepare instructions for medical officers regarding the prevention of infectious diseases in camps This commission is composed of Dr Flexner, Dr Charles V Chapin, Providence, R I, Col Frederick P Reynolds, M C, U S Army, Dr William H Welch, Baltimore, Dr Herman M Biggs, New York, and Dr Victor C. Vaughan, Ann Arbor, Mich

Position of Physicians Under the Selective Conscription

A physician inquires "As I am just within the upper conscription age limit I would like to know whether, if I did not apply for commission in the Reserve Corps, and if I should be selected by the draft, I could then make application for the Reserve Corps I ask this because I have been hearing that medical men in the conscription limits who do *not* join the reserve will, on being drafted, be put in as hospital orderlies and given no-chance of joining the reserve"

Answer.—It has not yet been determined what will be the position of the physician who is drafted No doubt, however, the War Department will avail itself of any special knowledge which the conscripted man may possess We know of no reason why a physician who is drafted may not ask to be transferred to the Medical Corps

Physician Detailed on Pershing's Staff

Major Fred T Murphy, St. Louis, second in command of U S Base Hospital No 12, has been detailed to duty on the staff of General Pershing

American to Fight Tuberculosis in France

Mr Homer Folks, New York, president of the National Association for the Study and *Prevention of* Tuberculosis, has been asked by the government to assist in the antituberculosis work in France

Medical Students and Conscription

The following are typical of numerous inquiries which have been received from medical students regarding exemption from the draft

> "I am a student in the *University of Illinois* Medical School I read in your journal that it was the duty of the medical students *to* continue in school I wrote the War Department in regard to whether medical students would be drafted I received very little satisfaction, and I believe that medical students will not be exempt."

> "Would you be so kind as to write me, if possible the status of medical students under this Conscription Law, whether they will be allowed to continue in school or whether they will be drafted?"

These two letters are simply samples We regret to say that no action has thus far been taken by the government in regard to premedical students, medical students or physicians

The probability is, however, that the secretary of war will recognize the needs of the Medical Department and grant the requests that have been made to him that medical students, if not premedical students be exempt from year to year, in other words, allowed to proceed with their studies

Commissions in the Reserve Corps

During the week ending June 23 1917, seventeen majors, 105 captains and 1 050 lieutenants were recommended to the adjutant-general of the army for commission in the Medical Reserve Corps

Acceptance of a Commission Should Indicate Willingness to Serve

The Surgeon General's Office urges that physicians who cannot be spared from medical faculties or hospital staffs for active service shall not apply for or accept commissions in the Medical Reserve Corps

Roentgen-Ray Tests for Recruits

Health Commissioner Biggs has made plans for the Roentgen-ray examination for tuberculosis of New York state recruits At least 1 000 men are to be so examined and it is believed that the results will determine whether an examination of this nature is necessary in order to make a diagnosis of tuberculosis In France 150 000 men have returned from the front with active tuberculosis and it is hoped that by rigid examination before enlistment, the spread of the diseases in a serious form among our new armies may be prevented.

Doctors to Fit Men Physically for Service

On June 20 a session was held at the College of Physicians and Surgeons Philadelphia at which physicians past the age for medical service organized for the reclamation of men physically unfit for the United States Army or Navy Major W W Keen was elected president of the organization and the vice presidents, Drs John B Deaver and James M Anders Physicians more than 55 years of age, doctors who cannot pass the reserve corps medical examination and physicians who for other reasons cannot go to the front, will form the membership of the organization which will include also dental surgeons pharmacists and chiropodists The plan is to have a camp where men who have been refused service in the army or navy for minor defects may have these defects cured or so remedied that they will be able to enlist later This is carrying out the plan of Dr William Duffield Robinson which won the approval of the surgeon-general. The entire equipment of the Germantown Hospital has been offered.

Reeducation and Rehabilitation of Maimed, Crippled, and Otherwise Disabled Soldiers

A conference on the reeducation and rehabilitation of maimed crippled and otherwise disabled soldiers was called by the General Medical Board of the Advisory Commission of the Council of National Defense on June 22 The conference was organized from among groups of specialists having knowledge of the various problems likely to arise The membership of the conference was as follows Dr James Bordley Jr., Baltimore representing ophthalmology, Dr John Staige Davis, Baltimore, plastic surgery, Mr C R. Dooley, Pittsburgh, vocational education, Dr S I Franz, Washington D C., neurophysiology, Mr F B Gilbreth, Providence R. I management engineer, Dr R. W Lovett, Boston, orthopedic surgery, Dr Harris P Mosher, Boston otologist, Dr T H Weisenburg Philadelphia, neurology, Dr W A. White, Washington, psychiatry, and Dr Edwin W Ryerson, Chicago, orthopedic surgery The findings and recommendations of the conference were submitted by the chairman, Dr Franz, to the general board on June 24

The recommendations of the conference were as follows

1 It is believed that the work of a committee on reeducation and rehabilitation of the maimed and crippled will be most effectively performed if one or more medical officers be designated to cooperate with it.

2 Activity with respect to reeducation work should begin as early as possible. This should be by intensive instruction of medical officers, in medical specialties at the present and future army medical camps or by sending selected squads to establish medical schools for short terms of special instruction

> The medical specialties that have direct bearing upon the problems of reeducation are orthopedic surgery, plastic surgery neurology, psychiatry ophthalmology, and otology

3 If reeducation is to be carried out with the best results it is desirable that special treatment of the wounded should be carried out under the direction of specialists as early as possible

4 The establishment of reconstruction hospitals, or hospital schools for the repair of cripples and disabled persons is essential These institutions should preferably be widely distributed and should be large rather than small It is preferable to utilize existing institutions, when suitable or adaptable for the work, rather than to build others

> Hospital schools for crippled are particularly adapted for such use having beds instrument shops and industrial schools To supplement the three state institutions Massachusetts Minnesota and Nebraska now available, and such similar private institutions which may later be offered is unnecessary Public hospitals and other public institutions may be utilized for the purpose

Convalescent homes which may be separate from hospitals will also be required Large country places vacant country hotels etc, would be suitable The institutions should be under military control

The conference would recommend a census of suitable institutions which would be available in different parts of the country

> In France in April 1916 there were about 50,000 amputated and otherwise disabled soldiers needing medical reconstruction and reeducation Biesalski has estimated that in Germany 40 000 cripples were produced in the first few months of the war From 70 to 80 per cent. of the wounded returned to Canada have needed reconstruction and reeducation work

5 Relatively few of the cripples can return to their former occupations because of their disabilities, and they must be taught new ones.

The experience of other countries now at war shows that careful examinations physical and mental, must be made of the crippled and maimed as a basis for the determination of the individual capabilities for reeducation The conference believes that careful analysis should be made of different occupations to determine the anatomical characteristics necessary for them, as a guide for those who will have charge of vocational education. Careful attention should also be given to the matter of modifying the occupation to fit the individual

> In England scientific examination of the men was not made at first and many cripples were permitted to undertake to learn occupations for which they were not fitted physically mentally or by previous experience France has also had the same experience

6 The conference believes that every disabled soldier, whether or not unable to follow his former occupation should be kept under military discipline until the completion of physical reconstruction and reeducation

> It has been found that many disabled soldiers in European countries would not undertake reeducation, and apparently preferred to be permitted to remain helpless and thus, a social liability Every man should be compelled to undertake to learn an occupation that will enable him to be self supporting or partly self supporting This is quite apart from the consideration of pensions a matter which the conference was not called upon to discuss.

7 Reeducation must be a cooperative endeavor of all the special interests involved medical educational and social

8 A committee on vocational education has been formed under the auspices of the Council of National Defense The work of that committee and that of a committee on the reeducation and rehabilitation of the maimed and crippled where they meet should be intimately correlated.

9 The conference feels that as great publicity as is consistent with public policy should be given to the work of reeducation and rehabilitation of the maimed and crippled The public should be taught that the cripple is not to be considered a total economic loss but should realize that if suitably trained he will be an economic asset.

10 That a permanent Committee be appointed to carry out whatever plan that may be adopted and

11 That this committee should contain representatives of the various medical educational and social interests concerned and should comprise in its membership representatives of the Army the Navy, and Public Health Service and the American Red Cross.

In presenting the recommendations of the conference, the chairman Dr Franz, made the following statement on conditions abroad and work already done in this connection (On account of lack of space Dr Franz' address will be published in the Miscellany department of The Journal next week.)

The report and recommendations of the conference was taken under consideration by the General Medical Board.

Conference on Child Welfare in War Time

At a conference called by the General Medical Board of the Council of National Defense, in Washington, June 15, to consider and report on child welfare work during the present emergency, the following resolutions were adopted

1 We urge the Council of National Defense to direct that, so far as practicable physicians teaching obstetrics and pediatrics and those devoting themselves exclusively to problems of maternity and of infant and child welfare continue in such service either at home or abroad

2 Realizing that public health nurses are essential to the carrying on of child welfare work we recommend that every possible effort be made to prevent these especially trained nurses from being withdrawn from

such work, and that public health nursing be officially recognized as war service.

3 Recognizing the increasing need for trained nurses and the inadequate number available for military and home service, we recommend especially efforts to enlist graduates of colleges and high schools and other suitable candidates for hospital training courses.

4 Organized volunteer aids should be enlisted to assist public health nurses and other social workers through all practicable methods of personal service We advise appropriate courses of training for such volunteers.

5 We recommend that the Council call upon all committees to see *to it that there is no abatement, but, on the contrary,* a decided increase in their activities along the lines of maternal, infant, and child welfare, —this to apply to all public and private agencies.

6 We deplore the breaking up of the home and recommend that everywhere special provision be made to keep the *mother* and her young children together in the home, but this does not imply the endorsement of the home work system Mothers of nursing infants should be provided for through mothers' pensions or otherwise Day nurseries should be especially supervised, and reference should be had to the standards of the National Federation of Day Nurseries The highest standards should be required of all children's institutions

7 We urge that the Council of National Defense recommend the prompt enactment of model laws for the registration of births and deaths and the reporting of preventable diseases in the States in which such laws do not exist, and we strongly urge their complete enforcement throughout the country

8 We urge that every effort be made not only to prevent the repeal or relaxation of any of the existing child labor laws, but we urge on the contrary their more rigid enforcement and the enactment of such further laws as may be needed We recommend a plan of supervision similar to that adopted by the National Child Labor Committee in pamphlets 276 and 277

9 For the sake of obtaining the highest possible development of child life and as one of the best means of conserving the character and moral tone as well as physical development of the growing child we recommend the extension and use of all sound recreational facilities.

10 Appreciating that no plan for real child conservation in war time can be developed without a serious consideration of the mentally defective child and the juvenile delinquent, and especially because of the great increase in juvenile delinquency in Europe since the war we urge the Council of National Defense to recommend to the various States that greater facilities be created for the recognition and handling of these problems, through the schools, medical teaching, juvenile court work, and children's institutions.

11 We recommend proper medical examination and supervision for boys and girls entering volunteer organizations involving physical exercise

12 We urge as particularly important the medical examination of boys and girls before they enter industries, also subsequent medical oversight for them

13 We recommend systematic publicity and free circulation of accredited literature on maternal, infant, and child welfare Since many organizations are distributing pamphlets and literature broadcast, some good and some poor, we recommend that a committee of obstetricians, pediatricians, sanitarians, and nurses be appointed to review and standardize such literature for wider distribution

14 We strongly endorse the measures taken by the Army and Navy authorities for the moral protection of the military forces and endorse also liberal recreational facilities as an indispensable measure to that end

15 We urge that immediate steps be taken to secure the adoption of a Governmental plan to assure adequate support for soldiers and their families. This plan should include financial and medical provision, facilities for the reeducation of the *injured* soldier, and the reestablishment of the family Such a plan promptly put into operation would have more effect in promoting child welfare than any other measure which the Government could adopt on behalf of the dependents *of men in service*

16 This country should be warned by the mistake of the European countries which have allowed their milk supplies to become impaired It should therefore take the necessary steps to prevent a milk shortage. We protest against the indiscriminate slaughter of milch cows.

17 We urge the Council of National Defense to *ascertain* whether there is need among the Allied Nations for maternity care and infant and child welfare work that can properly be performed by Americans, and if this be the case, that the Council confer with suitable persons or organizations with a view to rendering such service

18 We recommend that the Council of National Defense organize a national committee representative of maternal, infant, and child welfare associations, to keep in touch *during the present* emergency with national problems of maternal, infant, and child welfare, and to advise the Council of National Defense from time to time of such *features of the* then existing situation as may call for remedial action We recommend further that the Council of National Defense, through the several State Councils of Defense, cooperate with local organizations interested in maternal, infant and child welfare and establish an agency or appoint an existing agency to secure information as to the specific needs of each community and to show how such needs can be adequately met We recommend that so much of this report as may be approved by the Council of National Defense be transmitted to the State Councils of Defense and to the proposed national and state *committees* recommended above, if such committees be created, or designated, to guide them in their respective actions looking toward the conservation of maternal, infant and child welfare during the present emergency

These resolutions were presented to the General Medical Board on June 24, and were taken under advisement.

Orders to Officers of Medical Reserve Corps

ALABAMA

To Fort Oglethorpe, Ga, Lieuts Burr Ferguson, Fairfield, James R. Hudnall, Coalmont, and William J Robbins, Ensley

To Washington, D C, Lieut. Drayton G Doherty, Selma

The resignation of Lieut Thomas H Scott, Ft. Morgan, has been accepted

ARIZONA

To Fort Oglethorpe, Ga, Lieut H Reese *Bisbee.*

ARKANSAS

To Fort Oglethorpe, Ga., Lieut Harry C King, Ft. Smith

CALIFORNIA

To Calexico, Cal., Capt. John J Kyle, Los Angeles, and report to commanding officer of camp, John H Beacom

To Chicago, Capt George H Evans, San Francisco, about June 30, Lieut. Col Lionel D Prince, San Francisco, Lieut Bruno F Sandow, Oakland With Ambulance Company, No 2, Lieut Cyril E Lewis, Calistoga, and Lieut F W Kroll, San *Francisco*

To Fort Myer, Lieut. George C H Franklin, San Francisco

To Letterman General Hospital Presidio of San Francisco, Major Walter C Chidester, and Lieut. Albert Cohen, San Mateo, Capt. Julian M Wolfsohn, San Francisco

So much of Par 69, S O 122, May 26, War D, as relates to Capt George H Evans, San Francisco, is revoked

So much of Par 74, S O 103, May 4, War D, as relates to Lieut. George C H Franklin, San Francisco, is revoked

DISTRICT OF COLUMBIA

To Army Medical School, Washington, D C, Lieut Earle G Breeding, Washington

To Gettysburg, Lieut. Rudolph Bloom, Washington

To Fort Oglethorpe, Ga., Lieut Charles E Ralph, Washington.

FLORIDA

To Fort Oglethorpe, Ga., Lieut Percy H Brigham, Alton, Lt. Samuel G Hollingsworth, Bradentown, Lieut G W Sherouse, Campville Lieut Raymond Howe, Daytonia, Lieut. George C Tillman, Gainesville, Capt Harry A Peyton, and Lieuts James B Parramore, Archie R Parrot, and Turner Cason, Jacksonville, Capt. Frank R Maura, Myakka City, Lieut Joel W Hood, Ocala, Lieut. John W M'Clane, St Petersburg, and Capt Andrew R Bond, Tampa

To Canal Zone, Capt. Henry Hanson, Jacksonville, and Report to Governor

GEORGIA

To Fort Benjamin Harrison, Ind, Major William A Powell, Cairo

To Fort Oglethorpe, Ga., Lieut. Walter A Miller, Arabia, Capt Montague L Boyd, Atlanta, Lieut. William W Jarrell, Thomasville, and Lieut Heber J Morton, Waynesboro

To New York, Lieut Charles A Hodges, Dublin

To Syracuse, N Y, Lieut John W Lee, Porterdale

To Washington, D C, to join the 6th Engineers, Lieut. Ferdinand H Herrmann, Eastman

IDAHO

To Fort Oglethorpe Ga, Capt Francis H Poole, and Lieut Leo F Castle, Pocatello, and Capt Julius L Arntzen, Paris

To Fort Riley Kansas, for instruction, Capt. Curtis Bland, Preston

ILLINOIS

To Army Medical School, Washington, D C, Capt H H Pillinger, Algonquin, Capts John E Kelley and Frederick W Moeller, Chicago, Lieut Roswell T Pettit, Ottawa, and Lieut Samuel H Richman, Oak Forest

To Fort Oglethorpe, Capt Albert E McEvers, Chicago

To Fort Riley Kans, Lieut James R Williams, Danville

To Gettysburg, Lieut Anthony H Bennewitz, Cicero

To Syracuse, Capt George E Hilgard, Belleville.

INDIANA

To Army Medical School, Washington, D C, Lieut Jesse L. M'Elroy, Indianapolis

To Fort Benjamin Harrison, Lieut L H Redman, Elizabethtown

To Fort Oglethorpe, Lieut W W Harris, *Ellettsville*

To New York, Lieuts Arthur E Guedel, Indianapolis, and Ulysses G Goodwin, Monticello

To Syracuse Lieut Edward G Brandenberger, *Rockville.*

IOWA

To Army Medical School, Washington, D C, Lieuts. Samuel Miller, Des Moines, and Frederick C Smith, Keokuk

To Fort Riley, Kansas, Lieut Edward S Parker, Idagrove

To New York, Lieut Theodore W Kemmerer, *Davenport,* for a course in Medical Research work at Rockefeller Institute

To Fort Oglethorpe, Ga, Lieut E J Lambert, Ottumwa

KANSAS

To Fort Oglethorpe, Ga, Lieut *Alonzo* Woodford Little, Jr, Kansas City

KENTUCKY

To Fort Oglethorpe, Ga., Lieuts Arthur C Henthorn, Garrison, and William L Carman, Paint Lick

LOUISIANA

To Fort Oglethorpe Ga. Capts Cyriaque J Gremillion, Alexandria James J Robert Baton Rouge and Randell Hunt, Shreveport Lieuts Edward J Huhner New Orleans and Thomas Ragan, Shreveport

MAINE

To Army Medical School, Washington, D C, Lieut Paul S Hill, Biddiford

So much of Para 59 S O 112 May 15, War D as relates to Capt Charles H Hunt Portland, is revoked

MARYLAND

To Baltimore Major Frederick H Baetjer, Catonsville designated instructor in roentgenology at Baltimore

To New York Lieut. James A Duff Westport

To Fort Oglethorpe Ga Lieuts Bartus T Baggott C W Hoffmann, James J O Connor and Hugh W Sweeny Baltimore, William D Cawley Elkton Maynard I Simmons Indian Head

MASSACHUSETTS

To Army Medical School, Washington, D C Lieuts William M Dobson and P R Withington Boston Henry L Davis Lynn

To New York for course of instruction in Medical Research at Rockefeller Institute Lieuts. Charles H Bailey Gardner, Homer I Canner Haverhill George L. Schadt, Springfield and George C Lincoln Worcester

To Fort Oglethorpe Capt Walter R Weiser Springfield

To 12th Field Artillery Lieut. James B Pascoe Fort Revere.

MICHIGAN

To Army Medical School, Washington, D C. Lieut Harry H Hammell Ann Arbor

To Detroit Lieuts. W H Browne and G L. Coan, Detroit

To Fort Oglethorpe Lieut Paul B Bender Caro

To Syracuse Lieut Ward F Seeley, Detroit

To 9th Engineers National Army Capt. W W Manton Detroit

Lieut. Dean W Myers Ann Arbor honorably discharged

Resignation of Lieut Roscoe G Leland Kalamazoo, accepted

MINNESOTA

To Army Medical School, Washington D C, Lieut. Raymond A Whittier Morton to report to commanding officer of that school as assistant to professor of sanitary tactics.

To Fort Oglethorpe Ga. Lieut Henry L. Stickney Rochester

MISSISSIPPI

To Washington D C Lieut. W C Brewer, Columbus.

To New York Lieuts Wythe M Rhett, Columbus and James L. Dunlap Muldon.

MISSOURI

To Army Medical School, Washington, D C Lieuts. Wallace A Belsey William I Smith Philip M Stimson and Nicholas A Young St Louis

To Fort Benjamin Harrison Lieut Pierre L Chandeysson St Louis.

To Fort Leavenworth, Kansas Lieut. Arthur A. Hobbs Kansas City and Capt. Stuart L. Baysinger Rolla.

To Fort Riley Kansas Lieuts Robert R Glynn Springfield and Joseph C Hynes St. Louis

To Gettysburg Lieut Charles L. Munson St. Louis.

To New York Lieuts Ernest L. Coffin and Howard M Foster St. Louis.

To Fort Oglethorpe Ga Capt. Vilray P Blair St Louis

To St Louis Lieut. William E. Leighton St. Louis to conduct examination of applicants for appointment in M R C On completion of this duty Lieut. Leighton will stand relieved from further active duty

The resignation of Lieut Harry B Davis Kansas City has been accepted.

MONTANA

To Fort Riley Kansas Lieut Harry J Huene, Forsyth.

NEW HAMPSHIRE

To Fort Ethan Allen Capt. Amos G Straw, Manchester

NEW JERSEY

To Fort Oglethorpe Ga Lieuts Robert W Rodman Allendale Livingstone L. Lewis and Henry T Von Deesten, Hoboken Capts Nicholas F Feury and Richard Hirsch and Lieuts. Jacob Rosenberg and Julius Sobin Jersey City Samuel W Dodd Montclair Carmine G Berardinelli James J L. Young and Anthony C Zehnder Newark George H Richards Orange Murray B Kirkpatrick and Lawrence H Rogers Trenton and Frederick J Quigley Union Hill.

To Gettysburg Lieut. Richard Bew Atlantic City

To New York for course of instruction in Medical Research at Rockefeller Inst Lieuts. Frederic H Thorne, Greystone Park and Dundas R. Campbell Newark.

To Syracuse Lieut John T English Newark

To Washington D C Capt. E J G Beardsley, Spring Lake Beach and Lieut. J W Rice New Brunswick.

NEW MEXICO

Lieut. Louis H Pate Carlsbad honorably discharged.

NEW YORK

To Allentown Pa. Lieut. Samuel William S Toms, Nyack.

To Fort Benjamin Harrison Ind, Capt. C B Lee, New York.

To Fort Oglethorpe, Ga. Capts. William F Butler, Brooklyn, Charles W Haverkampf Ft Jay, as surgeon and charge of general hospital Howard Fox, from Ft Slocum, for course of instruction Lieut Royden M Vose, Ithaca Robert E Seibels, New York City, and Elmer B Shaul Richfield Springs

To Fort Porter N Y, Maj George H Scott, Ft Jay and Capt John G Stowe Buffalo

To Gettysburg Lieut Joseph Price New York

To New York Lieuts Hugh Chaplin New York and Walter D McKenna, Troy For course of instruction in Medical Research at Rockefeller Institute Capt Howard L Van Winkle, Albany Lieuts Stephen H Curtis Albany William L Aycock, New York City and Donald J McPherson Palmyra

To Plattsburg Barracks Lieut Harold A Benson Kings Park

To Syracuse Lieuts Laurent G Feinier, Henry E Marks and Alexander Milean Jr New York City Reginald Ducat, New Rochelle

To Washington D C, Lieuts. Thomas M Holmes Delmar Nathaniel P Brooks New Lebanon Capt W D Anderson Lieuts James I Cobb, Thomas K Davis Linwood M Cable and Gilbert S Osincup and Charles H Watt New York City Sidney W Thompson Oswego Capt Max A Almy, Rochester, Lieuts Francis T Duffy Troy and George S Silliman Westbury For duty with 6th Engineers, Lieut Thomas L Cooney New York

NORTH CAROLINA

To Fort Oglethorpe Lieuts Julius N Hill, Murphy, John A Winstead Nashville and Alexander I Thompson, Troy

Lieut Frank R Ruff Duke to report by telegraph to commanding general Southeastern Department for assignment

To New York Lieuts Glenn Long Catawba, Booton S Compton Greensboro and Russell S Beam Lumberton

NORTH DAKOTA

To Washington D C Lieut R M Deming Mercer

So much of Par 55 S O 121 May 25 War D, as relates to Lieut Theo Bratrud Grand Forks is revoked

OHIO

To Army Medical School Washington D C Lieuts Fred S Wright Bellaire Herbert A Brown, Cincinnati William T Fenker, Columbus and Charles W Maxson Steubenville

To Fort Oglethorpe Ga. Lieut Charles H Young Ashtabula Capts R W Holmes Chillicothe William H Leet Conneaut Lieuts Gilbert W Brehm Columbia John R Wolfe Delphos W E Hart Elyria and Thomas M Wood National Military Home.

To New York Lieuts Virgil H Danforth Byesville Louis A Querner Cincinnati and Harry R Wahl Cleveland

To Home Lieut Leroy B Sherry Cleveland

OKLAHOMA

To Fort Oglethorpe Ga, Lieut Robert R Sellers Westville.

OREGON

Lieut Joseph A Pettit Portland has been honorably discharged.

PENNSYLVANIA

To Allentown Pa Capt Henry M Hall Pittsburgh Lieuts Roscoe F Mauser Fountain Springs J E Marshall Lebanon Frank N Greene and Sidney J Repplier Philadelphia T C Killeen Scranton

To Fort Oglethorpe Ga. Capts William W Babcock Ferdinand L Benz and Henry K Gaskill Philadelphia Lieuts Fred H Bloomhardt Altoona Robert A Kilduffe Chester James L. Junk Connellsville Roscoe L. Perkin Harrisburg Frederick P Simpson Mapleton Depot Richard R Spahr Mechanicsburg Henry A Gormand and Jacob S P Makler Mount Alto Charles W Vates Mount Oliver Carlton H Davidson New Salem Arthur E Davis and Leo P Gibbons Scranton Homer P Prowitt Washington John A Farrell West Chester Clyde W Sample Wilkinsburg Henry S Monroe Wind Ridge Louis S Weaver York Herman E Albrecht, James H Arnett Charles Bowne William R Bready Henry P Brown, Clifford B Farr Albert McConaghy Allen H Moore William S Newcomet Charles B Reynolds Charles H Tait Stephen W Tunnell Charles C Watt Jr, and Howard K White Philadelphia Moses H Baker John C Calhoun, Milton B Katzenstein Edward A Pitcairn and Maurice S Redmond Pittsburgh

To Fort Schuyler N Y Lieut John G Archer Jr Philadelphia

To Gettysburg Lieuts Bartholomew M Allen and Theodore Melnick Philadelphia, Thompson McD Baird, Wilkes Barre, and Clyde L. Curl Pittsburgh

To New York Lieuts Michael W Stofer Chambersburg Norman J Quinn Conshohocken George A Poux Meadville John Berry Mont Alto Andrew A Flannagan Jr Philadelphia and Alfred W Duff Pittsburgh

To Rockefeller Institute for course in Medical Research Lieuts. Charles B Reitz Allentown and George R Moffitt Harrisburg

To Washington D C Capt. J H Austin Ardmore Lieuts James H Austin Ardmore Charles C Crouse Derry Kenneth A. Allen and J E McDowell Philadelphia Joseph B Gold and Maurice S Redmond Pittsburgh George H Robinson Uniontown

To 9th Regiment Engineers National Army Lieut. H. C Flood Pittsburgh

Resignation of Lieut. William M Workman Mt Joy has been accepted

To Home Lieut Thomas W Penrose Philadelphia and upon arrival report by telegraph to Adjutant General

So much of Par 52, S O 121, May 25, War D, as relates to Lieut Clarence F Bernatz, Pittsburgh, is revoked

So much of Par 83, S O 136, June 13, War D, as relates to Lieut James L Junk, Connellsville, is revoked

SOUTH CAROLINA

To Army Medical School, Washington, D C, Lieut Robert H Crawford

To Allentown, Pa, Lieut Benjamin F Wyman, Aiken

To Gettysburg, Lieut Lawrence R Craig, Dillon

To Washington, D C, Lieut Robert H Crawford, Rock Hill

TENNESSEE

To Fort Oglethorpe, Ga, Lieuts Gilbert M Roberts, Chattanooga, Homer Reese, Galatin, Joseph W Bauman, Nashville, Robert B Underwood, and Arthur R Porter, Memphis

To Memphis, Lieut Edward C Ellett, Memphis, to examine applicants for commission in aviation section, Signal O R. C

TEXAS

To Fort Des Moines Ia, Capt George W Cook, Harlingen

To Fort McPherson, Major Louis C Duncan, Ft Bliss

To Fort Oglethorpe, Lieut Col Thomas J Kirkpatrick, Brownsville, as vice surgeon and manager of the general hospital Capt John T Halsell, Laredo, Lieuts Knight W Field, Dallas, J E Boyd, Hillsboro, Robert L Dinwiddie, San Antonio, Jorn A Lightfoot, Texarkana, and George H Stagner, Waco

To Washington, D C, Lieut Ernst W Bertner, Houston

UTAH

To Fort Oglethorpe, Ga, Lieut Howard T Wickert, Huntsville

VIRGINIA

To Fort Myer, Lieut Minor C Lile, University

To Fort Oglethorpe, Ga, Lieuts Alvah Ramsey, Burkeville, John B Halligan, Petersburg, Lonsdale J Roper, Portsmouth, William L Peple and Henry S Stern, Richmond, and Robert B Shackleford, The Plains

To Gettysburg, Capt Reading L Williams, Norfolk

To New York, Lieuts George H Musgrave, Boykins, and Baxter L Crawford, Richmond

WEST VIRGINIA

To Fort Oglethorpe Ga, Lieut Morris I Mendeloff, Charleston.

To Home, Lieut E T Lake, Nuss

WISCONSIN

To New York, Lieut Frank X Pomainville, Grand Rapids

PHILIPPINE ISLANDS

To Chicago, Lieut Donald P McCord, Manila, for assignment to duty and station

To Fort Benjamin Harrison, Ind, Capt Samuel J Turnbull, Manila

To Fort Oglethorpe, Ga, Capt George B Angle, Manila

Orders to Officers of the Medical Corps

Lieut Col Frederick P Reynolds, M C, to duty in office of Surgeon General

Lieut. Col George A Skinner, Major J B Huggins, Capts George B Foster, Jr, M C, Robert Skelton, M C, and Adna G Wilde, M C, to report at Nogales, Ariz., for examination for promotion

Lieut Col Edward R Schreiner, M C, to New York, N Y, for investigating the Columbia University War Hospital, with a view to its use as a receiving and forwarding hospital for the Medical Service

Major James I Mabee, M C, to Fort Niagara, N Y, and will join

Major Guy V Rukke, M C, to Plattsburg training camp for duty

Major George H Scott, M C, to Fort Porter, N Y, for station

Major Wilson T Davidson, Capts T L Ferenbaugh and John G Ingold, M C, to Laredo, Texas

Major Louis C Duncan, M C, to Fort McPherson

Major William R Eastman, M C, to report for examination for promotion

Medical officers to report at Douglas for examination for promotion Major Robert Thornburg, Capts George H McLellan, Wayne H Crum, Frederick H Foucar, Benjamin B Warriner and John R Barber

Officers of Medical Corps to report at El Paso for examination for promotion Lieut Col James M Kennedy, M C, Majors T S Rhoads, P H McAndrew and Arthur W Morse, Capts J S Lambie, Jr, R W Kerr, L C Garcia, A D Davis, C C Demmer, J P Fletcher, J S Fox, F Kramer, F X Strong, A von Schrader T S Scott, T E Harwood, Jr, H S Purnell and J D Whitham

Medical officers to report at Marfa, Texas Capts P B Connolly, George E Pariseau and Michael A. Daley

Capt. George B Lake, M C, to report at Eagle Pass for examination for promotion

Capt James F Johnston, M C, to Columbia, S C, for duty as camp sanitary officer

Capt T H Johnson, M C, to Gettysburg, Pa, for duty

Capt William S Shields, M C, from Omaha to station at New York

Medical officers to report at Brownsville, Texas, for examination for promotion Capts Thomas W Burnett, Norman T Kirk, Sanford W French and Neal N Wood

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest, such as relate to society activities, new hospitals, education, public health, etc)

ARKANSAS

Higher Preliminary Requirements—The Medical Department of the University of Arkansas reports that after Jan 1, 1918, the entrance requirements will be increased to two years of college work, including courses in physics, chemistry and biology The state medical board of the Arkansas Medical Society has also adopted that standard, which will apply to all graduates after Jan 1, 1922

CONNECTICUT

Personal—Dr Milton C Winternitz, formerly associate professor of pathology in Johns Hopkins University, Baltimore, has been elected professor of pathology in the School of Medicine of Yale University——Dr Frederick N Sperry, New Haven, has been elected president and Dr Charles E. Sanford, New Haven, secretary of the Yale Medical Alumni Association

State Board Reorganized—The new public health board authorized by the recent general assembly, which replaces the state board of health, has been appointed by the governor Dr John T Black, New London, has been appointed commissioner of health for a six-year term The council is composed of Dr Edward K Root, Hartford, E. W Brown, Bridgeport, Prof C E A Winslow, New Haven, Mr J A. Newlands, West Hartford, and Mr J Frederick Jackson, New Haven

Connecticut Adopts Maryland Plan—The Connecticut State Medical Society has adopted the Maryland plan and appointed Drs D Chester Brown, Danbury, and John E Lane, New Haven, a committee for carrying out the details of its application Letters have been sent to all the physicians of the state and there has been a gratifyingly large number who have signed the agreement to turn over one third of the income received from patients of physicians who have entered the Medical Reserve Corps

IDAHO

Personal—Dr Tracy R. Mason has been elected mayor of Kellogg——Dr William R Hamilton has been reelected mayor of Weiser——Dr Berton O Clark, Payette, has been appointed a member of the state board of health, to succeed Dr Oscar B Steely, Pocatello, term expired

Society Meetings—The joint meeting of the Whitman County Medical Society and North Idaho Medical Society was held in Moscow, June 12 The principal addresses were made by Charles W Shaff, Lewiston, and W R Palmonton, Colfax——The physicians of Minidoka and Power counties have organized at Rupert Dr John J B Kenagy, Rupert, was elected president, Dr Vincent R. Killen, Rupert, secretary

ILLINOIS

Chicago

Women Elect Officers—The Medical Women's Club of Chicago had its annual meeting, June 13, and elected the following officers Dr Clara P Seippel, president, Drs Mary Louise Acres and Helga Ruud, vice presidents, Dr Mary Agnes B Mulcahy, secretary, and Dr Grace H Campbell, treasurer

Personal.—Dr Willis O Nance, Chicago, was appointed a member of the consulting staff of Cook County Hospital, June 25, to succeed the late Dr John B Murphy——Dr Norman Bridge, Los Angeles, spoke, June 20, before the Intercollegiate Club——Dr Wallace C Abbott, Chicago, has been elected president and Dr George H Searle, Chicago, secretary-treasurer of the American Association of Pharmaceutical Chemists at its annual meeting in Atlantic City, June 13

INDIANA

Medical Units Ordered Into Service—To Field Hospital No 1, Indianapolis, commanded by Major Larue D Carter, and Ambulance Company No 1, Frankford, Ind, commanded by Lieut John P Nicodemus, Logansport, have been ordered to immediate duty at Fort Benjamin Harrison Ind, in connection with the training camp of the Medical Officers Reserve Corps

MAINE

Personal—Dr Pearl T Haskell was elected superintendent of the Bangor State Hospital June 13, succeeding Dr Frederick L Hills resigned——Dr Lester F Norris has been promoted to first assistant superintendent and Dr Roy A Thornley to second assistant superintendent of the Bangor State Hospital

MARYLAND

Criticism of Rural School System.—Surg James A Nydegger, U S P H S, who is appealing to physicians of Maryland to enforce medical inspection of children under 12 years of age in the rural schools states that if the rural school system of Maryland and other states is corrected 75 per cent of the physical defects which today are barring men from service in the United States forces, will disappear Dr Nydegger found that defective eyes, ears, teeth and throats are due largely to rural school conditions and that the improper desks and seats have caused much spinal curvature

Personal—Dr Robert W Johnson Jr., Baltimore, has sailed for France——Dr Ernest W Watson Baltimore has resigned from the staff of the Brady Urological Institute, Baltimore and opened offices in Buffalo.——Drs Harry C Algire, Charles R. Parker, William G Coppage Jacob Fisher and L. Ridgely Wilson have been appointed surgeons to the Baltimore park board——Dr John W Sanderson, Baltimore, who has been under treatment for several weeks in the Maryland General Hospital on account of injuries received in a fall is reported to be convalescent——Dr Joseph W Roberts Salisbury has been appointed medical superintendent of the Maryland General Hospital——Drs William G Clopton and Charles Norton have been appointed health wardens of Baltimore——Dr Joseph Irwin France has been elected to the United States Senate from Maryland.

MASSACHUSETTS

Hospital Opens Private Ward Building—The Massachusetts General Hospital has opened a private ward building on Charles Street, Boston, eight stories in height, of fireproof construction and with accommodation for 122 patients

Camp for Crippled Children—A donation of $50 000 by an anonymous benefactor has made possible a camp for crippled children in Berkshire, about five miles from Pittsfield, where a farm has been leased The camp will be under the general direction of Dr W Russell MacAusland Boston, and will accommodate at the outset about twenty children

Conservation of Child Life—The state health commissioner has appointed as a committee on the conservation of child life, Drs David L Edsall and William J Gallivan, members of the public health council and Dr Lyman A. Jones, director of the division of hygiene of the state health department As consulting members he has named Drs Fritz B Talbot, pediatrist and chief of the children's medical department, Massachusetts General Hospital, Richard M Smith Boston, pediatrist, assistant in pediatrics, Harvard Medical School, Walter E. Fernald, psychiatist, superintendent of the Massachusetts School for the Feebleminded, and William Healy, psychologist, director of the psychopathic institute of the Chicago Juvenile Court, and Miss Mary Beard, director of the Instructive District Nursing Association

Hospital Items—The mayor of Boston has issued a call for contributions for the Orthopedic Hospital to be established on Parker Hill, Roxbury, under the direction of Dr Joel E. Goldthwait. The total cost of the first equipment of the Hospital will be $12,000 The institution will be operated in conjunction with the Peter Bent Brigham Hospital Boston, and will be used during the war as a physical repair shop——The city council of Boston has authorized the mayor to borrow $75,000 for the reconstruction of the ward buildings of the City Hospital, which were damaged by explosion and fire two months ago The reconstructed buildings will provide 100 additional beds for the institution——The Winchester Hospital was formally opened last week The institution represents an outlay of about $75 000 and will accommodate fifty patients

State Society Meeting—The one hundred and thirty-sixth annual meeting of the Massachusetts State Medical Society was held in Boston, June 12 and 13, under the presidency of Dr Samuel B Woodward, Worcester A motion favoring national prohibition was adopted, and the society agreed to subscribe $5 000 to the Liberty Loan Bonds The Shattuck lecture was by Dr Walter B Cannon George Higginson, professor of physiology in Harvard Medical School, and was on the subject of The Physiological Factors Concerned in Surgical Shock," and in the absence of the author in Europe, was read by Dr Austin W Cheever The following officers were elected president, Dr Samuel B Woodward (reelected) Worcester, vice president, Dr George P Twitchell, Greenfield secretary, Dr Walter L Burrage, Boston (reelected), treasurer Dr Arthur K Stone, Boston, orator, Dr Myles Standish Boston and librarian Dr H Brigham, Boston

Personal.—Dr George B Wislocki has been appointed to the Arthur Tracy Cabot Fellow chair, in charge of the laboratory of surgical research of Harvard University William J Brown has been made instructor in public health administration in Harvard University——Dr Townsend W Thorndike clinical assistant in dermatology, and Dr Theodore W Ely assistant in pediatrics in Harvard Medical School, have resigned——Dr Edward W Brown Northampton, has been appointed medical examiner (coroner) for the first Hampshire district——Dr Arthur K Stone and Simon Swig have been reappointed trustees of the Boston Hospital for Consumptives——Dr Lewis M Palmer, Framingham, has been appointed trustee of the Massachusetts Training School——Dr Matthew T Mayes Springfield has been reappointed a member of the Board of Registration in Medicine——Dr John A Peterson Hingham, has been reappointed medical examiner (coroner) for Plymouth County——Dr Paul H Provandie Melrose Highlands, while driving in his automobile over a grade crossing at Wyoming Avenue, Melrose was struck by a train and severely injured——Dr Loring Grimes Swampscott has been appointed associate medical examiner (coroner) for the Ninth Essex District——Dr Albert J McCrea Southbridge has been appointed medical examiner (coroner) for the Eighth Worcester District——Major Gen Leonard Wood U S Army, has been nominated for a position on the Board of Overseers of Harvard University

NEW YORK

Personal—Dr Edward Clark Buffalo, sanitary supervisor for western New York of the state department of health has been designated to take charge of the division of child hygiene of the department——Drs Benjamin Arnold Albany, and Walter B James, New York have been appointed members of the Hospital Development Commission the purpose of which is to develop the facilities for caring adequately for the insane population of the state——Dr Irving M Snow has been elected president, Dr Herbert A Smith, secretary and Dr Bernard F Schreiner, treasurer of the Buffalo Academy of Science.

New York City

Physician Vindicated—In a suit brought against Dr Philip G Manecke Brooklyn by Mrs Agnes Stutterer, in which she claimed $50 000 damages, the supreme court decided, June 15, in favor of Dr Manecke

Summer Courses at New York University—In compliance to a request from the students themselves, the third year men in the University and Bellevue Hospital Medical College are to continue their courses of study during the summer so that they will be prepared to receive their degree of Doctor of Medicine about the middle of February All the junior class, consisting of ninety men, have pledged themselves to take the continuous summer course

Baby Health Stations Give Instructions in Dietetics—The city health department has arranged to give lessons in cooking and dietetics to mothers at its baby health stations This will provide sixty centers of instruction, all located in congested parts of the city As a sufficient number of trained dieticians did not volunteer for this work, a course in practical dietetics was given to nurses in charge of the health stations through the assistance of Teachers College and Pratt Institute

Personal.—Dr Samuel G Gant has resigned as professor of rectal diseases in the New York Post-Graduate Hospital and has taken charge of a special clinic in Hospital for Deformities and Joint Diseases——Dr Harry Finkelstein has been appointed instructor in orthopedics at the Post-Graduate Hospital.——Dr Charles Rosenheck has been appointed instructor in neurology in the College of Physicians and Surgeons in the City of New York——Dr Cornelius G Coakley suffered a fracture of the right leg in a fall from his horse in Central Park, recently——Dr Edward Horace Cleveland has been appointed superintendent of the Hospital and House of Rest for Consumptives at Inwood-on-Hudson

Chief Medical Examiner Needed—The Municipal Civil Service Commission announces an examination to be held for chief medical examiner The examination is open to all citizens of the United States and the annual compensation is $7,500 for full time service. The candidates must be at least 30 years of age, must have a degree from a recognized institution and must present evidence of having done at least ten years' work in the pathological laboratory of a recognized medical school, hospital, asylum or public morgue, or in other corresponding official capacity They must have performed at least 1,000 autopsies Special consideration will be given to administrative experience, preparation and presentation of evidence in court, and definite published contributions to the science of legal medicine The examination will include a practical test in which the candidates will be required to perform an autopsy and to report their findings in writing, an experience statement and an oral test Full particulars and applications may be obtained at Room 1400, Municipal

PENNSYLVANIA

Field Hospital Mustered Into Service—Field Hospital No 4, Pennsylvania N G, Pittsburgh, was mustered into service June 13, and Ambulance Company No 3, Coraopolis, Pa, June 14

Philadelphia

Hospital Tablet Unveiled—A tablet in memory of Miss Elizabeth Anderson was unveiled, June 22, at the American Oncologic Hospital Miss Anderson, who died in 1906, was a patient at the hospital and left the general fund of the institution, $40,000

Personal—Dr Frank C Abbott, who has been in France since the beginning of the war, was specially mentioned for service on the occasion of the distribution of medals at Vendome——Dr Ernest La Place has been selected as one of the orators at the Independence Day celebration, Independence Hall

Weir Mitchell Tablet Unveiled—A feature of the class day exercises of the University of Pennsylvania, June 19, was the unveiling of a bronze tablet in memory of Dr S Weir Mitchell It is a reproduction of the one in the Franklin Inn by Dr R. Tait McKenzie, and the gift of Joseph Rosengarten, trustee of the university Two of Dr Mitchell's colleagues and friends spoke words of eulogy, Dr C C Harrison, ex provost of the university, and Dr William W Keen

RHODE ISLAND

New Health Officer—Dr John Hillman Bennett has been appointed superintendent of health of Pawtucket, succeeding Dr Charles H Holt, who has been ordered to duty with the Medical Officers Reserve Corps at Fort Benjamin Harrison, Indiana

New State Board Officers—At the annual meeting of the state board of health held in Providence, June 14, Dr John Hillman Bennett, Pawtucket, was reelected president, Dr R Morton Smith, River Point, vice president, and Dr Byron U Richards, Pawtucket, secretary, succeeding Dr Gardner T Swarts, who had been secretary of the board for twenty-three years

State Society Meeting—The annual meeting of the Rhode Island Medical Society was held, May 31, in the Rhode Island Medical Library, and was followed by a dinner in the evening at the Narragansett Hotel The Fiske fund prize of $200 was awarded to Dr Joseph F Hawkins, Providence, for his essay on "The Role of Tonsils and Teeth in Arthritis" The presidential address by Dr Edmund D Chesebro, Providence, was on the topic "Thirty Years in the Study and Practice of Medicine", and after the presidential address Dr John C Champlin, Westerly, the newly elected president, was inducted into office

WISCONSIN

State Board Appointments—The governor, on June 19, reappointed Drs Oscar Lotz, Milwaukee, Frederick C Haney, Watertown, and Fay T Clark, Waupun, members of the State Board of Medical Examiners, and appointed Edward Murphy, Eau Claire, a member of the same board, to succeed Dr William L Thompson, Sheboygan

Personal.—State Senator A J Pullen, North Fond du Lac first lieutenant, M O R C, U S Army, has been notified of his assignment to base hospital service in France——Dr Edward Evans, LaCrosse, has been elected a nonresident fellow of McGill University, Montreal——Dr Willibald J Wehle, West Bend, dislocated his right shoulder in a automobile accident, June 3——Dr Wesley L. Boyden, Seymour, has been commissioned first lieutenant, M C, Wis N G, and assigned to the Second Infantry

Million for Medical School—The Carnegie Foundation for the Advancement of Teaching has offered one third of a million dollars to Marquette University of Milwaukee on condition that the university raise the other two thirds of a million The fund is to be used in the development of the Marquette University School of Medicine The arrangement allows the university a year in which to raise the additional funds to make the amount offered available A committee of citizens of Milwaukee has the campaign in charge

CANADA

Personal—Lieut-Col Charles Carter, Hamilton, Ont, is to succeed Lieut-Col Cameron A Warren as assistant A D M S, Toronto Military District

Wounded Medical Officers—The *Lancet* reports that the following officers of the Canadian Army Medical Corps have been wounded Lieut.-Col. James J Fraser, Walkerton, Capt Ronald H MacDonald, Saskatoon, Albert H Wallace, Hazleton, and Harry C Wallace, Lumsden

Annual Meeting Canadian Medical Association—In his presidential address before the Canadian Medical Association, Dr Alexander D Blackader, Montreal, said that so many of the members were overseas that the annual meeting had not been held for three years, and this one was held as it marked the fiftieth anniverstry of the founding of the association The Canadian Medical Association, in that time, had taken a pronounced part in raising a high standard of medical education in Canada, and now it was intended to raise the standard still higher and extend the medical course The day of the general practitioner and family physician is passing and he is being replaced by the specialist Health insurance will be a tremendous benefit to the country and will incidentally raise the standard of rational living and prolong human life Dr Charles J C O Hastings, M O H, Toronto, delivered the address on public health in which he advocated strongly for public propaganda and practical organization for the education of the general public in regard to health organization for the education of the general public in regard to health matters Any city which does not provide pure water, or any municipality, as well as pure milk, should be held criminally responsible for such neglect It is the first duty of statesmen to provide for public health, as the value of man power is of more moment now than at any other time in history A symposium on tuberculosis, as a national problem, was opened by Dr James Third, Kingston, Ont Lieut-Col J N Roy, M D, who has been attached to the Canadian General Hospital, St. Cloud, France, stated that hospital conditions were greatly improved in France He gave an interesting account of the work of the Canadian hospital at St Cloud which now has 550 beds and looks after French wounded only Dr Joseph D Page, superintendent of the Immigration Hospital, Quebec City, addressed the meeting on the physical examination of immigrants He stated that 80 per cent of the soldiers returning from the front were infected with tuberculosis and that of the 100,000 defectives admitted into Canada ten years ago, only five had been rejected The examination of immigrants required immediate action on the part of the government of Canada Dr Elzear Relletier, Montreal, advocated the appointment of a permanent medical officer of health in every municipality in Canada who should devote all his time and energies to the public health of the community This was put in the form of a resolution and passed by the meeting Dr Francis J Shepherd, Montreal, delivered the address in surgery, and Dr Theodore C Janeway, Baltimore, the address in medicine

GENERAL

Baltimore and Ohio Surgeons Elect—At the annual meeting of the Baltimore and Ohio Association of Railway Surgeons, held in Cleveland, June 22, Dr William H Morrison, Philadelphia, was elected president, Dr Edmund B Fittro, Salem, W Va, vice president, and Charles Johnson, Baltimore, was continued as secretary

Special Campaign Against Yellow Fever—The Cuban government and the International Health Commission are cooperating in a new movement against yellow fever Leave of absence has been granted to Dr Juan Guiteras, director of sanitation of Cuba, so that he may inaugurate a vigorous campaign to stamp out the disease in other countries Gen William C. Gorgas has given to Dr Guiteras full authority to investigate yellow fever conditions wherever they may be found in other countries and to make any suggestions that he may see fit toward the extermination of the disease As most of the members of the International Health Commission are officers of the United States Army Medical Corps, the Cuban government is signally honored in the appointment of Dr Guiteras a Cuban Director Taylor of Las Animas Hospital in Havana is cooperating in the work It is proposed to begin the scientific researches on the island of Martinique and in Maracaibo

FOREIGN

Rockefeller Foundation Builds Hospitals in China—The Rockefeller Foundation has awarded contracts for the building of two hospitals, to cost $3 000 000 One of these will be located in Pekin and the other in Shanghai, and both will be for the work of the China Medical Board

Yale Mission Seeks Workers—The Yale Mission ("Yale in China") at Changsha seeks the services of an emergency teacher of pathology for one or two years for its medical school, also a permanent teacher in physiology and a specialist in eye, ear, nose and throat for permanent service High professional quality is demanded and earnestness of character The New Haven office is 5 White Hall

Medical Missionary Ordered to French War Front.—The American Board of Commissioners for Foreign Missions has announced that leave of absence for the duration of the war has been granted to Dr James F Cooper Foochow, China, that he may go to France as medical officer to the Chinese Labor Battalion Dr Cooper will have charge of the Base Hospital and will take to France four Chinese nurses from the American Mission Hospital Foo Chow

Honors for French Physicians of the Army and Navy Medical Departments.—The *Bulletin Medical* has published six large special numbers to date, each devoted entirely to the official mentions of the exceptional gallantry and devotion of individual members of the medical corps, with the appointments to the Legion of Honor the awarding of the medaille militaire and other honors Each contains an alphabetical list of those thus decorated Many of the accounts specify 'efficiency in organization" and 'coolness in danger," but practically all mention the "absolutely devoted services and brilliant gallantry," of the physicians and surgeons in question.

PARIS LETTER

Paris, May 31, 1917

The War

REORGANIZATION OF THE MEDICAL CORPS ON A SELF-GOVERNING BASIS

If it is true that in the course of this war important improvements have been effected in the military medical service, notably in that which pertains to the evacuation of the wounded, the last offensive movement has brought to light certain weaknesses in its organization These weaknesses were the outgrowth of the strict and jealous tutelage which the general staff exercised over the army medical service Indeed, it is only proper to state that up to the present time the military medical service has been far from self-governing, for instance, for the construction of temporary hospitals the medical corps depended on the corps of engineers In deciding on the location the number and the capacity of the evacuation hospitals it followed the advice of the staff officers The hospital train service was taken entirely out of the hands of the medical corps, and placed under the authority of the railway commissary The secretary of war has deemed it wise to remedy these defects in the system The last offensive movement showed him the need of a readjustment of the relations of the medical corps to the military officers so as to put in the hands of the medical service the disposition of its means of action, and to allow it to cooperate in the elaboration of military operations The staff, which all too often ignored the medical corps will be obliged from now on to consider it as a necessary collaborator The purpose which the secretary of war had in mind in adopting these measures was to bring the assurance to all ranks that the most complete collaboration existed between the general staff the various divisional staffs and the military medical service Under this plan every army corps has its chief administrative medical officer who collaborates with the general officer in command of the corps The latter will keep this chief surgeon informed of his plans, will acquaint him with the objects to be accomplished, the front decided on for the battle and the hour set for the engagement Having been enlightened by this precise information the role of the chief surgeon will begin at once With his mind illumined as to the significance of the battle to be fought he will know what it involves for the medical corps He will proportion his effort to the probable needs and make all the dispositions necessary for the best hospitalization and for the most rapid evacuation of the wounded The reserves in personnel and medical equipment are at his disposal and under his control He apportions the personnel according to their competency and the army s needs He approves requisitions for medical supplies, and provides for the carrying out of all hygienic and prophylactic measures

The same organization found in the army corps is also established in the divisions and in the administration of rations The control of the motor ambulances used in transporting the wounded will now pass entirely into the hands of the divisional surgeons, and the commanding officer often more interested in the conservation of his equipment than in the fate of the wounded whom he was convoying, will no longer rise up as a sole judge of the conduct of affairs The surgeon will base his decision on the condition of the wounded and the capacity of the hospital units In the controlling railway stations a surgeon with the relative rank of battalion commander is associated with every railway commissary He exercises technical control of all the hospital trains passing through the controlling stations He decides on the hospitalization of patients or wounded unable to continue their journey Acting in concert with the railway commissary, he determines the destination of trains in the zone of the armies and the zones of the interior He remains in touch, on the one hand with the chief administrative medical officers, and on the other hand with the undersecretary of state for the military medical service

MUTUAL RELATIONS BETWEEN FRENCH AND AMERICAN UNIVERSITIES

Professor Finley president of the New York state university, in a reunion held at the Sorbonne May 26, presented before an assembly of professors of the University of Paris communications and letters emanating from more than 100 institutions of learning in the United States which gave expression to the sympathy that unites American universities to our own and emphasized the necessity for the development of mutual relations between the universities of the two countries

TYPHOID BACTERIURIA

At the medicochirurgical reunion of the fifth army corps, Drs Tanon and Dumont communicated results of some practical researches on the urine of patients convalescing from typhoid fever which had been confirmed clinically and bacteriologically From March 1915 to January, 1917, a period of twenty-one months, 1,500 specimens of urine were examined and gave twenty-nine positive results Out of these twenty-nine cases the typhoid bacillus was found in ten, the paratyphoid A in fifteen, and the paratyphoid B in four All of these specimens of urine were examined as soon as the patients became convalescent that is to say, the second week of complete apyrexia The specimens were always clear, and rarely contained traces of albumin There was no clinical evidence of any renal or bladder trouble and the cytologic examination showed few leukocytes This small proportion of 2 per cent. out of so large a number of cases indicates that the danger from carriers of urinary germs must not be exaggerated as far as typhoid fever is concerned The treatment, moreover, had a beneficent influence on almost all the patients Those recognized as carriers at an examination were, in fact, immediately subjected to treatment with hexamethylenamin dosage 1 5 gm per day, and the bacteriuria disappeared at the end of eight or ten days In only three cases did it last a month These were two cases of typhoid bacillus and one of paratyphoid A. Of these three patients, only one failed to recover This patient had to be transported to the interior, and was pronounced a carrier of the typhoid bacillus The practice of subjecting all patients convalescing from typhoid or paratyphoid fever to a treatment with hexamethylenamin seems to be recommended in order to expedite the evacuation of convalescents

Marriages

MAJOR PERRY L BOYER, M C, U S Army, to Miss Shirley Doe of Ottawa, Ont, June 20

LIEUT EDWARD JOHN DAVIN, M O R C, U S Army, New York, to Miss Alice Ayleward of Goshen, N Y, in New York, recently

LIEUT PRESCOTT STEARNS TUCKER, M C, U S Army, to Miss Dickie Mae Tennant of Oskaloosa, Iowa, at Aiken, S C, February 25

SURG JAMES CHAMBERS PRYOR, Lieut-Com, U S Navy, to Miss Frances Pierpont Siviter of Pittsburgh, June 9

CHARLES WILLIAM HUTCHINSON, M D, Framingham, Mass, to Miss Ethel Fay Warfield of Springfield, Mass, June 11

EDWARD LOUIS ROBBINS, M D, Syracuse, N Y, to Miss Margaret Theresa Coughlin of Albany, N Y, June 16

Deaths

Thomas Carroll Hoover, M D, Columbus, Ohio, Starling Medical College, Columbus, 1873, aged 67, formerly a member of the American Medical Association, a member of the Ohio State Medical Association, professor of surgery in his alma mater, and later professor of clinical surgery in the Ohio Medical University, Columbus, surgeon to St Francis Hospital and consulting surgeon to the Children's Hospital, Columbus, who had been ill for two years, died in West Bedford, Mass, June 2

Richard Eli Holder, M D, Columbus, Ind, Medical College of Ohio, Cincinnati, 1879, Bellevue Hospital Medical College, 1884, aged 65, a Fellow of the American Medical Association and a member of the American Association of Anesthetists, died suddenly of heart disease, June 6, while in New York, in attendance at the meeting of the American Medical Association

Charles Boyd Williams, M D, Sharon, Pa, Western Pennsylvania Medical College, Pittsburgh, 1903, aged 41, formerly a Fellow of the American Medical Association, a member of the Medical Society of the State of Pennsylvania, died in his apartment, June 4, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent

Charles W Houghton, M D, Wynnewood, Pa, Pennsylvania Medical College, Philadelphia, 1859, aged 80, a Fellow of the American Medical Association, a verteran of the Civil War in which he served as medical director, a member of the board of managers of the American Stomach Hospital, Philadelphia, died at his home, June 5

George Henri Mathiott, M D, Mars, Pa, Western Pennsylvania Medical College, Pittsburgh, 1887, aged 64, formerly a Fellow of the American Medical Association, for many years a druggist of New Haven, Pa, secretary of the Mars Board of Health, died at his home, May 28, from cerebral hemorrhage

Felix Edgar Baldridge, M D, Huntsville, Ala, Tulane University, New Orleans, 1894, aged 50, formerly a Fellow of the American Medical Association, a member of the Medical Association of the State of Alabama, and Southern Surgical and Gynecological Association, died at his home, June 7, from pneumonia

Albert T Poffenberger, M D, Sunbury, Pa, Jefferson Medical College, 1879, aged 54, a member of the Medical Society of the State of Pennsylvania, for twenty-eight years chief medical examiner for the Williamsport-Harrisburg district of the Pennsylvania System, died at his home, June 1

Edward Michael McCabe, M D, New Haven, Conn, Yale University, New Haven, 1887, aged 53, a Fellow of the American Medical Association, instructor in ophthalmology in his alma mater, ophthalmologist to the St Francis Hospital Asylum, New Haven, died at his home, June 7

Laura Marie Reville, M D, Plaquemines, La, Woman's Medical College of Pennsylvania, Philadelphia, 1890, aged 78, formerly a member of the Medical Society of the District of Columbia and a practitioner of Washington, D C, died at her home, June 6, from acute dysentery

Elias Sloan, M D, Marietta, Ohio, Eclectic Medical Institute, Cincinnati, 1875, aged 68, formerly a member of the Ohio State Medical Association, for several years president of the school board of Williamstown, Ohio, died at his home, May 23, from cerebral hemorrhage

Jarrett T Benbrook, M D, Rockwall, Texas, Missouri Medical College, St Louis, 1878, aged 76, formerly a Fellow of the American Medical Association and president of the North Texas District Medical Association, died at his home in East Rockwall, May 30

Albert Taylor Chapman, M D, Old Mystic, Conn, College of Physicians and Surgeons in the City of New York, 1864, aged 77, a member of the Connecticut State Medical Society, who had been blind for more than thirty years, died at his home, May 11

William Davis McConnaughey, M D, Prairie City, Iowa, College of Physicians and Surgeons, Keokuk, Iowa, 1883, aged 66, formerly a Fellow of the American Medical Association, for twenty-five years township physician, died at his home, June 17

Harriet Foster Pillsbury, M D, Oakland, Calif, Woman's Medical College of the New York Infirmary for Women and Children, 1880, formerly a member of the Medical Society of the State of California, died at the home of her son in Oakland, May 30

John O Hobbs, M D, Chicago, Northwestern University Medical School, Chicago, 1872, for several years professor of anatomy in the Northwestern University Woman's Medical School, Chicago, died at his home, June 21, from heart disease

Edward Nealley Mayo, M D, Orono, Maine, George Washington University, Washington, D C, 1860, aged 80, formerly a member of the Maine Medical Association and president of the Penobscot County Medical Society, died at his home, May 27

James A Winter, M D, Detroit, Detroit College of Medicine and Surgery, 1887, aged 53, a Fellow of the American Medical Association and a member of the Detroit Academy of Medicine, and its president in 1914, died at his home, June 4

Percy Larkin, M D, Athens, Texas, Kentucky School of Medicine, Louisville, 1890, aged 55, formerly a Fellow of the American Medical Association, a member of the State Medical Society of Texas, died suddenly in Dallas, Texas, May 29

John Charles O'Brien, Jr, M D, Greenfield, Mass, Tufts Medical School, Boston, 1915, aged 26, who was operated on in the Franklin County Hospital, three weeks before, for appendicitis, died at his home, May 23, from pneumonia

Thomas Benton Barnes, M D, Spruce Pine, Ala, Memphis (Tenn) Medical College, 1873, aged 61, a member of the Medical Association of the State of Alabama, died at his home, May 28, from cerebral hemorrhage

Francis Asbury Norman, M D, Washington, D C, Cincinnati College of Medicine and Surgery, 1871, aged 74, for more than thirty years a practitioner of Columbus, Ohio, died at his home, June 3

William De H Reeder, M D, Chicago, University of Nashville, Tenn, 1865, aged 75, surgeon of the Fifteenth Pennsylvania Volunteer Cavalry during the Civil War, died at his home, May 19

Oliver Glenn Bruner, M D, Fort Deposit, Ala, University of Alabama, Mobile, 1884, aged 65, a member of the Medical Association of the State of Alabama, died suddenly at his home, May 31

Robert E Davies, M D, Petty, Texas, University of Mobile, Ala, 1872, aged 69, formerly a Fellow of the American Medical Association, a Confederate veteran, died in Dallas, Texas, May 21

William D Maddox, M D, Denver, Keokuk (Iowa) Medical College, 1892, aged 53, a member of the Colorado State Medical Society, also a druggist, died in Mercy Hospital, May 29

Harry Chester Justice, M D, Columbus, Ohio, Ohio Medical University, 1898, aged 49, died at his home, May 31, from acute dilatation of the heart

Andrew Fuller Harris, M D, Chicago, Hahnemann Medical College, Chicago, 1884, aged 61, died at his home, June 15, from cerebral hemorrhage.

George B Abbott, M D, Chicago, Northwestern University Medical School, Chicago, 1878, aged 60, died at his home, June 15

Thomas A. Wood, M D, Dexter, Ga., University of Georgia, Augusta, 1886, aged 69, died at his home, May 22.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

BROM-I-PHOS

Report of the Council on Pharmacy and Chemistry

Brom I-Phos (National Drug Company Philadelphia) was submitted to the Council with a label bearing the following statement

ALCOHOL 25 PER CENT '
COMPOSITION—Per Fluidounce

Iodin	1 gr
Bromin	1 gr
Phosphorus	1/100 gr,
Aromatic Base	q s '

A request for further information in regard to the composition of Brom I-Phos was sent to the National Drug Company It was suggested that since the preparation cannot contain the stated amounts of free bromin free iodin and free phosphorus the form of combination in which these elements are present should be set forth In reply the firm said first that Brom-I-Phos consists of Bromin Iodin, Phosphorus Glycerin Wine Water and Volatile Oils The Iodin is rubbed up with a small percentage of Potassium Iodid and 95 per cent Alcohol which solution is mixed with a solution of Bromine and Spirits of Phosphorus which are combined with the base and aromatics ' The manufacturer also admitted that phosphorus reacts with bromin and iodin and that other reactions might occur but maintained that it was justified in assuming the greater part if not all of these elements are actually existent in the nascent state" and asserted that its printed formula complies with our working formula in point of quantities involved as well as existence of elements in an uncombined state '

The A. M A Chemical Laboratory reported, on the contrary that no free phosphorus free bromin or free iodin could be found in Brom-I-Phos and that no bromate or iodate could be found bromid and iodid were present The addition of silver nitrate to an acidulated portion, diluted with water, gave an amount of silver halid roughly agreeing with that which would be obtained had the claimed amount of bromin and iodin (together with some potassium iodid) been used in the preparation of Brom-I-Phos and in the process of manufacture become converted to bromid and iodid

The statement of composition is unsatisfactory and misleading in that it suggests that the preparation contains bromin iodin and phosphorus in the free (elementary) state The presence of the potent elementary phosphorus is especially suggested by the small amounts of "phosphorus" declared

The following claims are therapeutic exaggerations

> "The Ideal Alterative
> *indicated in all cases where an alterative is desired* '
>
> 'The association of Bromin with Iodin in Brom I Phos materially enhances the product in the treatment of chronic affections of the skin depraved conditions of the mucous membranes tertiary syphilis glandular enlargements etc"

In that it suggests that the phosphorus in Brom-I-Phos is more readily assimilated than ordinary phosphate, the following is misleading

> 'The Phosphorus contained in Brom I Phos is readily assimilated and at once acts as a nutrient to the nervous and osseous structures of the body stimulates metabolism and increases mental activity

The recommendation "Your specification of Brom-I-Phos in the treatment of Syphilitic cases will immediately prove beneficial to the patient" is not supported by evidence The name does not indicate that Brom-I-Phos is an alcoholic preparation with iodid as its essential constituent, but suggests that phosphorus is an important constituent, whereas the amount of phosphate or phosphite, produced by the action of iodin on elementary phosphorus (if the amount of phosphorus used in making the preparation is correctly stated) is insignificant.

The combination of bromin, iodin and phosphorus, or bromid, iodid and phosphate, is irrational because these elements are not of mutual assistance to each other in the conditions for which Brom-I-Phos is advertised

The Council's report was submitted to the *manufacturer* of Brom-I-Phos for comment, the reply contained nothing to permit a revision of the previous conclusions

The Council declared Brom-I-Phos inadmissible to New and Nonofficial Remedies

Correspondence

THE CHIMERA OF COMPULSORY HEALTH INSURANCE

To the Editor — If the forces of autocracy can divide us they will overcome us" These momentous words were being sent to a European nation by the President *of* the United States and almost simultaneously in the United States a group of men who *should stand for all that is sound,* high and noble were formulating sentiments favorable to the establishment of an autocratic form of government among us

This is a sad commentary on Americanism

Will you publish this? Is the cost of paper too high? Will it conflict with the policies of the mighty Association of which I have been a proud member for the past ten years? If you can resist the temptation of the blue pencil, my respect for you will go up by leaps and bounds Let us see what you will do

Any fool can start a fire, but it may take a good many wise men to put it out. Allow me to congratulate the House of Delegates on its resolution authorizing its Council on Health and Public Instruction to study further the subject of compulsory health insurance et al, before proceeding to the extremity of endorsing that monstrous chimera Pray God it may study long and decide wisely

The word compulsion' has an ugly sound to freemen It suggests the click of handcuffs, the clank of gyves, the treadmill the knout the dungeon and the rack. It smacks of the Inquisition and all that goes with it

To thinking men the whole propaganda should suggest the iron hand or rather the mailed fist, in the velvet glove, for it is that and its source proves it From every standpoint except the political it is a vicious delusion To the politician it is a prospective gold mine—a land of milk and honey soon to be opened up—perhaps

To aid the Council in its deliberations, permit me to quote a little *from* the writings of Charles Mackay, penned in the first half of the last century, but which might almost have been written yesterday

> In reading the history of nations we find that, like individuals they have their whims and their peculiarities their seasons of excitement and recklessness when they care not what they do We find that whole communities suddenly fix their minds upon one object and go *mad in its pursuit that millions of people become simultaneously* impressed with one delusion and run after it till their attention is caught by some new folly more captivating than the first We see one nation suddenly seized from its highest to its lowest members with a fierce desire of military glory another as suddenly becoming crazed upon a religious scruple and neither of them recovering its senses until it has shed rivers of blood and sown a harvest of groans and tears to be reaped by its posterity At an early age in the annals of Europe its population lost their wits about the sepulcher of Jesus and crowded in frenzied multitudes to the Holy Land another age went mad for fear of the devil and offered up hundreds of thousands of victims to the delusion of witchcraft At *another time*, the many became crazed on the subject of the philosopher's stone, and committed follies until then unheard of in the pursuit It was once thought a venial offense in very *many* coutries of Europe to destroy an enemy by slow poison Persons who would have revolted at the idea of stabbing a man to the heart drugged his pottage without scruple Ladies of gentle birth and manners caught the contagion of murder, until poisoning under their auspices, became quite fashionable. Some delusions though notorious to all the world have subsisted for ages flourishing as widely among civilized and polished nations as among the early barbarians with whom they originated—that of duelling for instance and the belief in omens and *divination of the future which* seem to defy the progress of knowledge to eradicate them entirely from the popular mind. Money, again, has often been a cause of the delusion of multitudes Sober nations have all at once become

[illegible]

desperate gamblers, and risked almost their existence upon the turn of a piece of paper Men, it has been well said, think in herds, it will be seen that they go mad in herds, while they only recover their senses slowly, and one by one

How appropriate at the present time!

Also, let the Council be sure that it fully grasps the significance of the words of the honored President of our Association, Charles H Mayo, when he said in his address that the state does not exist for the good of the individual, but that the individual exists for the good of the state Epoch making words, these! As I interpret them they exalt the state and sound the death knell of individualism in our democracy if they shall crystallize into legislation If I understand anything of the relation of state and individual, it is that the individual antedated the state, which he created for his good, the state, then, is his servant, in a democracy at least, and when it presumes to become his absolute master, despotism, in my humble opinion, is not far away And as he came before it, I prophesy that the individual will survive the state

A few years from now, unless in the meantime some degree of sanity shall return to the brain of man, the great Third Estate of Medicine—the bourgeoisie—will either be in a state of active rebellion or else will lie decently buried under the Mountain of Compulsory Health Insurance, which will be a most magnificent tombstone

When that time shall have arrived, you have my full permission to write my name as my only epitaph on it as "one whose name is writ in water" I would rather die than live to witness the undermining of the principles on which my government is founded, the pauperization and prostitution of my profession, and the exploitation of my patients by this kultured beast of prey cloaked in the garb of philanthrophy This is what compulsory health insurance has been elsewhere, and what it would be here, all the fervid assertions of its proponents notwithstanding

I share the President's hope that the world may be made safe for democracy

Ralph S Cone, M D, Westwood, N J

SURGERY AND THE WAR

To the Editor —Sincere appreciation of the beautiful and high minded enthusiasm which prompts many hundred surgeons to vie with each other for the privilege of following our troops "on the continent" is my excuse for calling attention to one phase of our state of medical unpreparedness, and to suggest a partial remedy therefor A great part of surgery —that of the chest, abdomen, joints, fractures and blood vessels particularly—is being rewritten in the present war, but with rare exceptions our American journals have contented themselves with the publishing of an occasional rambling letter from a passing Red Cross surgeon or unattached medical tourist No one has given us in English a true picture of the present surgical conditions prevailing in Europe Likewise our universities and our special societies have made no provision for the presentation of this newer and all important surgery What a glorious occasion the American Medical Association has missed in failing to devote this year's program to the topics germane to the war, and how different in European societies, where everything unrelated to the care of the wounded is considered trivial, and where scientists and specialists in all lines strive to contribute their "bit" With his usual vision and promptness to act, Carrel recently returned to this country in order to demonstrate the complete and essential technical details of a revolutionary surgical therapeutic method of which the great majority of us possess only a certain yellow press knowledge

I deem it humiliating and inexcusable that our young surgeons should go abroad in ignorance of the tremendous advances already made in war surgery Perhaps the study of some foreign journals may prove efficient remedy In addition to the *British Journal of Surgery,* I would most strongly urge the careful perusal of the files of the weekly journal published by the Paris Surgical Society (*Bulletins et Mémoires de la Societé de chirurgie de Paris,* Masson et Cie, 120 Boulevard Saint Germain, Paris), a veritable mine of information thoroughly representative of the French school of surgeons For breadth and honesty of purpose, independence of thought, scientific form and literary culture, the latter publication is unquestionably the world's model, and its value has been greatly enhanced of late by innumerable contributions from a brilliant group of younger war surgeons From the postgraduate educational standpoint I know of nothing more useful than the close, continuous study of the lengthy analytic reports by members and the accompanying discussions contained in this weekly journal No military surgeon can afford to dispense with it Some weight must attach to the opinion of a member based on experience with 10,000 fracture cases during the past thirty months, or to that of another member who reports over 600 chest wounds, or to the masterly analysis of thousands of abdominal wounds The remarkable results following immediate excision and closure of extensive wounds (Gaudier-Chaput method) have revealed a totally new field of surgery with extremely wide possibilities The same may be said of the plastic surgery now being done in Paris Few congresses can show such memorable results as those attending the recent joint meetings of the Paris neurologic and surgical societies To one interested in medical education the forthcoming advent of numerous American surgeons in France bears a message of hope Contact with the best of a nation of idealists must surely tend to develop what we are rapidly losing sight of in our country the human side of medicine Contact with the only school (excepting the Scotch) that has remained faithful to clinical medicine cannot fail to restore to us the much needed type we lost with Osler's departure the master clinician, the maker of clinicians On the eve of the great French Renaissance in science and literature, let our young surgeons understand that nowhere in France are its unimpeachable and unselfish love and admiration for our country more manifest than in the medical profession A grateful nation awaits our men "on the continent."

F Dudley Tait, M D, Fellow of the
American College of Surgeons, San Francisco

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed Every letter must contain the writer's name and address, but these will be omitted, on request

PRIVILEGED COMMUNICATIONS

To the Editor —Is a physician permitted to refuse to give the parent or the legal guardian information received from a minor? This is an actual case The patient, a woman, aged 20, pledged a physician, whom she consulted without knowledge of her guardian, to secrecy She will not inform her guardian about her condition, and the doctor refuses all information on the ground of professional ethics What is the guardian to do?

A E F

Answer —Under "Privileged Communications," it is stated in the "American and English Encyclopedia of Law" that "Communications from a patient to his physician were not privileged at common law, but on considerations of public policy statutes have been enacted in most jurisdictions forbidding disclosure in evidence against the will of the patient of information acquired by physicians in their professional capacity

"In order for such statutes to apply, it is necessary that the relation of physician and patient should exist, or at least that the circumstances should be such as to impress the patient with the belief that it does

"*Who Are Patients?*—The term 'patient' in a statute prohibiting physicians from disclosing information acquired in attending a patient includes persons under a disability such as infancy, lunacy, etc. (See *Corty* v *Bolton,* Supm Ct App T, 31 Misc N Y 138, affirming N Y City Ct. Gen. T, 30 Misc N Y 836)"

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA Montgomery July 7 Chairman, Dr S W Welch Montgomery
ALASKA Juneau July 3 Sec Dr H C DeVighne Juneau
ARIZONA Phoenix July 2 3 Sec Dr John W Thoma 306 Goodrich Bldg Phoenix
COLORADO Denver July 3 Sec, Dr David A Strickler, 612 Empire Bldg Denver
CONNECTICUT Regular New Haven July 10 11 Sec Dr Charles A Tuttle 196 York St New Haven
CONNECTICUT Eclectic New Haven, July 10 Chairman Dr John W Fyfe Saugatuck
CONNECTICUT Homeopathic New Haven July 10 Sec, Dr Edwin C M Hall, 82 Grand Ave, New Haven
DISTRICT OF COLUMBIA Washington July 10 Sec Dr Edgar P Copeland The Rockingham Washington
INDIANA Indianapolis July 10-12 Sec, Dr W T Gott 84 State House Indianapolis
MAINE Augusta July 5 6 Sec Dr Frank W Searle, 776 Congress St Portland
MASSACHUSETTS Boston July 10-12 Sec Dr Walter P Bowers, Room 501 No 1 Beacon St Boston
NEBRASKA Lincoln July 2 Sec Dr E. Arthur Carr, 516 Bankers Life Bldg Lincoln
NEW MEXICO Santa Fe July 9 Sec, Dr R K McClanahan U S Naval Hospital Las Animas Colorado
NORTH DAKOTA Grand Forks July 3 Sec Dr George M Williamson Grand Forks
OKLAHOMA Oklahoma City July 10-11 Sec Dr R V Smith Tulsa.
PENNSYLVANIA Philadelphia and Pittsburgh July 10-12 Sec Mr Nathan C Schaeffer The Capitol Harrisburg
RHODE ISLAND Providence, July 5 Sec Dr Gardner T Swarts, 315 State House Providence
SOUTH DAKOTA Deadwood July 10 Sec Dr Park B Jenkins Waubay
UTAH Salt Lake City July 2 3 Sec, Dr G F Harding 407 Templeton Bldg Salt Lake City
VERMONT Burlington July 10-12 Sec Dr W Scott Nay Underhill
WASHINGTON Seattle July 3 5 Sec Dr C N Suttner, Walla Walla
WEST VIRGINIA Charleston, July 10 Sec. Dr S L. Jepson Capitol Bldg Charleston

Rhode Island April Examination

Dr Gardner T Swarts secretary of the Rhode Island State Board of Health reports the practical and written examination held at Providence April 5 6 1917 The total number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass 80 Five candidates were examined of whom 4 passed, and 1 failed The following colleges were represented

College		Year Grad	Per Cent.
	PASSED		
Atlanta Medical College		(1915)	86 2
University of Maryland		(1915)	93 8
University and Bellevue Hospital Medical College		(1915)	81
University of Vermont		(1911)	80
	FAILED		
University of Naples		(1912)	74 5

Kentucky License Reports

Dr A T McCormack secretary of the State Board of Health of Kentucky reports that one candidate was licensed by examination and one through reciprocity from April 17 to May 10 1917 The following colleges were represented

College	LICENSED BY EXAMINATION PASSED	Year Grad	Total No Licensed
Meharry Medical College		(1916)	1

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
University and Bellevue Hospital Medical College		(1905)	New Hamp

---

Water Filtration.—The first effective filter to be put into use in the United States was installed at Poughkeepsie, N Y, about 1875 The development of water purification in the United States since that time has been rapid, especially during the latter part of the period, as may be illustrated by some statistics cited by Mr George A. Johnson, who estimates that in 1900 somewhat less than 2,000,000 people in the United States were supplied with filtered water, while in 1911 the population supplied was approximately 8,000,000, and is at present about 20,000,000—W H. Frost, M.D., *Public Health Report*, Sept. 15, 1916

Social Medicine, Medical Economics and Miscellany

Standardizing Milk

Much progress has been made in the methods of production of clean milk, and conditions have been improved in almost every community, yet definite standards of quality have been established in only a few of the larger cities The National Commission on Milk Standards in its latest report (*Public Health Reports*, Feb 16, 1917) advocates the practicability of standards and grades of milk for small cities and towns

The commission has consistently worked to establish standards for milk production and grading, and its two former reports have been taken as the basis for recent municipal and state regulations The latest report is a continuation and practical extension of the milk grading and labeling system heretofore advocated and as now developed provides for three classes of milk—A, B and C—which the commission urges should be regarded as the minimum standard If the local conditions of a community permit, however, higher requirements should be adopted

As set forth in the report Grade A, raw milk, must come from cows free from disease as determined by tuberculin tests and physical examinations by a qualified veterinarian, produced and handled by employees free from disease as determined by medical inspection by a qualified physician, under sanitary conditions such that the bacterial count shall not exceed 10 000 per cubic centimeter at the time of delivery to the consumer and the dairy shall score at least 80 on the U S Bureau of Animal Industry score card Grade A, pasteurized milk must come from cows free from disease, must be produced and handled under sanitary conditions, and the bacterial count must at no time exceed 200,000 per cubic centimeter Milk of this class must be pasteurized under official supervision and the bacteria must not exceed 10 000 per cubic centimeter at the time of delivery to the consumer Dairies producing this class of milk must score at least 65

Grade B milk must come from cows free from disease as *determined by an annual physical examination* and must be produced and handled under sanitary conditions such that the bacterial count shall at no time exceed 1,000,000 per cubic centimeter This milk must be pasteurized under official supervision and the bacterial count must not exceed 50,000 per cubic centimeter at the time of delivery to the consumer It is recommended that dairies producing Grade B milk be scored and that efforts be made to improve the sources of supply as rapidly as possible

Grade C milk must come from cows free from disease, as determined by physical examinations, and includes milk having a bacterial count in excess of 1,000,000 per cubic centimeter This milk must be pasteurized, or subjected to a higher degree of heat, and must contain less than 50,000 bacteria per cubic centimeter when delivered to the consumer

As milk is one of our most valuable foods and one universally used chemical standards should be established defining its nutritive value. After a most careful consideration of this subject the commission proposes a food value standard of 3.25 per cent fat and 8 5 per cent. solids not fat as being a fair requirement to make of the producer and a standard of food value to which the consumer is entitled

It will be seen that the bacterial count is still made the primary basis of sanitary milk. Milk produced and handled under conditions conforming to the prescribed grades if kept cold, will always have a low bacterial count. The number of bacteria mentioned under each grade is not, however, to be regarded as inflexible for all communities It is said that in establishing bacterial standards for a city milk supply, the age of the milk, the distance hauled, the methods employed in handling and the sanitary condition of the milk at its source may all be taken into consideration Cities requiring a limited supply, coming from a few dairies within their own limits, or within a transportation distance of not over twelve hours from its source, may require a higher bacterial standard than a large city

Approximation to uniformity in the sanitary and chemical standards of milk and milk products is undoubtedly most desirable The grading and labeling of milk react to the benefit of producer and distributor as well as consumer The former, whose product comes up to standard requirements, should receive a better price for his milk, and the latter, in addition to the safety feature, is enabled to make an intelligent selection of milk for his various uses New York City first adopted the system of the national commission Practically, it has worked well, and neither dealer nor consumer would go back to the old methods New York State and California have state regulations based on the recommendations of the commission In Boston and Philadelphia the milk dealers themselves have started agitation for the grading and labeling of milk The effect is undoubtedly to improve the quality of the supply in every respect, and recommendations coming from an authoritative source, such as the National Commission on Milk Standards, should have the most careful consideration

---

Periodic Examination of Health Department Employees

For two years employees of the health department of New York City have been obliged to undergo annual medical examination, in addition to that required on admission to the department service Up to June, 1916, 2,104 employees had been examined, but in order to retain a convenient starting point for future investigations, only the first 2,000 are included in the statistical records, of these 1,325 are women and 779 are men During the past year nearly 1,000 reexaminations have been made, and of these 194 are men and 779 are women Of those examined, 22 8 per cent showed an albuminuria of greater or less extent As many as 2 5 per cent showed albuminuria combined with high blood pressure, and five cases of unsuspected glycosuria were discovered Uncorrected defects of vision were found in 15 1 per cent of the cases, and 17 71 per cent showed abnormality in hearing Acute or chronic pharyngitis and hypertrophied tonsils were present in 29 3 per cent, and impairment of nasal breathing, due to some form of rhinitis or to deflected septum, existed in 17.2 per cent. of those examined The number of organic heart lesions differed little between the sexes, the figures being 8 8 per cent for men and 6 7 per cent. for women In the vast majority of instances the individuals were not aware of any existing abnormality in the heart Pulmonary lesions existed in proportionately the same numbers, about 8 7 per cent for men and 5 5 per cent for women Of the men, 18 9 per cent showed excessive weight, while 21 2 per cent of the women showed this condition Those who show overweight receive careful warning and advice as to their habits and the regulation of their daily lives A relatively large number of women were underweight, 18 9 per cent. of those examined, but *only* 4 4 *per cent* of the men were underweight Overweight and hypertension coexisted in forty-six men and twenty-seven women, underweight and high blood pressure were found in five women and one man, low weight and low blood pressure in one man and in thirty women Forty-four women were markedly anemic, while only eighteen men suffered in a similar way Nearly twice as many women as men complained of indigestion, indigestion and constipation coexisted in a surprisingly small number Though more women suffered from indigestion than men, their teeth were cleaner and otherwise in a better condition Of the men, 8 8 per cent were constipated, and of the women 17 5 per cent Nearly 24 per cent of those examined showed defective teeth, only 4 9 per cent of these were women The examination disclosed more women suffering from hernia and from nervousness than men Exaggerated knee jerks were very common in women, 137 showing this symptom, often combined with a fine tremor of the hands Twice as many women as men complained of headache and more women than men complained of insomnia Hypertrophied glands were found in fifty-one women and in two men Women of foreign birth were more often affected with goiter than native women On reexamination, about 10 per cent of the persons examined showed very decided improvement over their previous condition The results in this series of timely advice and periodic examinations showed that such a method may be made an important aid in correcting the alarming mortality of middle age in this country The health department suggests that this plan should be adopted by all city departments because of the economic value to the employer as well as to the employee

---

Control of Poliomyelitis

The committee on poliomyelitis of the Conference of State and Provincial Boards of Health, which met in Washington, D C, April 30, reported that it had examined the epidemiologic data prepared in Massachusetts, New York, New Jersey and Minnesota, and those from the winter epidemic in West Virginia in 1916-1917, and that former statements as to the incubation period of the disease were confirmed, namely, that the incubation period varied from four to fourteen days, but was commonly seven days These data tend also to confirm the opinions that poliomyelitis is widely prevalent, but is generally of the nonparalytic type, and that the disease is transmitted chiefly by contact with a patient or carrier The committee suggested certain minimum requirements for the control of the disease, which were unanimously adopted, as follows

First That an isolation period for a patient of not less than two weeks nor more than three weeks from onset be required unless the temperature has not returned to normal in the meantime.

Second That children of the same household in contact with a patient be excluded from places of public assembly for a period of 14 days from last date of contact as determined by the health officer

Third That an adult of the household if the patient is properly isolated, may continue his vocation provided it does not bring him into contact with children at any time.

DISINFECTION

First, the discharges from the nose, throat and bowels of the patient be disinfected promptly, second, the caretaker shall wash her hands with soap and hot water promptly after handling said discharges, third, the caretaker shall wash her hands similarly before leaving the room occupied by the patient, fourth, isolation shall be terminated by a thorough washing of entire body and hair of the patient, and the room cleaned with soap and hot water, aired and sunned, fifth, sick room precautions should include the usual attention to cleaning and disinfection of eating utensils, personal and bed clothing, rugs, door knobs and other things handled by the patient or caretaker

PRECAUTIONS FOR PHYSICIANS AND NURSES

Unless a special covering and gloves be worn (a) the physician and nurse shall so handle the patient that discharges will not soil their clothing, special care being taken to avoid droplet infection , (b) the physician and nurse shall thoroughly wash their hands before leaving the premises.

HOSPITALIZATION

The removal to hospitals of patients affected with poliomyelitis when proper isolation and satisfactory care for the patient cannot be secured in the home, during the early stage of the disease the patient needs rest in bed and transfer to a hospital may be detrimental to his welfare

OTHER SUGGESTED MEASURES DESIGNED TO CONTROL THE DISEASE

(a) Travel and contact with children should be discouraged

(b) Surveillance for persons coming from infected districts is not necessary unless the person has been definitely exposed to infection

(c) The most effective agency in the control of this disease is the employment of public health nurses who, in cooperation with the physician, will teach sick room precautions, the necessity for rest in bed, and the need of proper support for affected parts

(d) Expert diagnosticians should be provided and the use of lumbar puncture urged

(e) Food, especially such as is consumed uncooked, should be considered as a possible means of transferring the infectious agent, and appropriate measures should be instituted to protect the public during an outbreak

(f) Where poliomyelitis occurs in a school, the school need not be closed but daily medical supervision should be instituted

(g) Efficient screening and the use of approved insecticides should be employed so that insects shall not have access to the patient or his excretions

(h) Household pets should be excluded from the sick room

(i) In the presence of poliomyelitis a search for, and a careful examination of, all ill children should be made All children having fever should be isolated pending the diagnosis

(j) Prompt reporting of all recognized or suspected cases, personally or by telegraph, or by telephone, is essential, in addition to the written report required by law

(k) Weekly reports by state and territorial health authorities should be made to the *United States Public Health Service*

Medicolegal

Compensation Same for Loss of a Defective Eye or of an Only Good Eye

(Purchase vs Grand Rapids Refrigerator Co (Mich) 160 N W R 391)

The Supreme Court of Michigan affirms an award by the industrial accident board in favor of the claimant as for the loss of an eye, although the eye had been previously injured leaving just enough vision in it to distinguish daylight from dark or to tell an approaching object It was contended that by the last injury while the claimant was in the employ of the refrigerator company, on account of which the eye was removed he did not lose an eye and that the period of actual disability resulting from the injury was the measure of weekly compensation to which he was entitled. The argument in support of this contention was based principally on the premises that the injured eye did not contribute to the claimant's earning capacity and its loss had not diminished it In deciding against this contention the court says that Nature has generously furnished some organs of the body in pairs A man can get along pretty well with one of them, as with one good eye or ear or lung or kidney, and it is probable that most men in most vocations, could and would earn quite as much with one of either of these organs removed If a man with one good eye is able to earn as much as he would if possessed of two eyes and loses, by accident the remaining eye it is actually that injury which wholly disables him from pursuing his previous vocation, since the previous loss of the other eye did not so disable him But the legislature has declared that the loss of both eyes (by the particular injury) shall constitute total and permanent disability and that for the loss (by the particular injury) of one eye the compensation shall be 50 per cent of the average weekly wages during 100 weeks It will be perceived that a man with two eyes might lose one of them without affecting his capacity to earn wages except for a few days or weeks and another with but one good eye, might be by its loss totally disabled to earn anything in his usual vocation In either case his compensation under the law, would be the same If such a result is regarded as unjust, in determining which the rights of the employer must be considered the remedy must be administered by the legislature The legislature has not attempted a definition, or made a declaration applicable to the case at bar except in terms of the loss of an eye It has not specified a normal eye although it may be concluded that the law refers to an eye which performs in some degree the functions of a normal eye A mere sightless organ might perhaps be considered no eye at all The claimant lost an eye, although an infirm one It was not wholly useless as an eye As a result of the injury there was some disability and the disability is deemed to continue for the period specified and the compensation so paid for such injury shall be as specified

Evidence Where Liquor Has Been Prescribed—Not Regulation of Practice of Medicine

(People vs Humphrey (Mich) 160 N W R 445)

The Supreme Court of Michigan sets aside a conviction of the defendant and grants him a new trial, after he had been convicted of having prescribed a quart of whisky for one Carpenter having good reason to believe that the said Carpenter intended to use the whisky as a beverage The court holds that the jury was erroneously instructed as to the effect to be given to the testimony of character witnesses for the defendant when it was told that when there is positive proof of the commission of an offense evidence of good character cannot avail to overthrow that proof Not only is evidence of good character admissible in a case in which doubt otherwise exists, but also it may be offered for the purpose of creating a doubt It must always be regarded as a miscarriage of justice when the trial court affirmatively denies to a defendant the benefit of an elementary rule favorable to him on which, by the giving of testimony which invokes the application of the rule, he relies But the court does not agree with the contention that new subject-matter was introduced into the statute which prohibits the manufacture, sale, etc, of intoxicating liquors when it was amended in 1911 by providing that any physician who prescribes any of the liquors mentioned for any person who he knows or has good reason to believe intends to use them in whole or in part as a beverage or in any other manner contrary to the provisions of this act or without a diagnosis showing that liquor is indicated shall be guilty, etc It was contended that this amendment introduced new subject-matter into the statute made that an offense which was not before an offense attempted to regulate the practice of medicine and subjected physicians under certain circumstances, to a penalty of none of which matters the title gives notice But to the court it is clear that the object—the single object—of the amendment is to prohibit the sale and furnishing of intoxicating liquors to be used as a beverage, equally clear that that is the object of the law This object is expressed in the title, and it is not apparent how the enforcement of the law as amended will at all interfere with, or regulate the practice of medicine Again the court says that the question for the jury (no one disputing the fact that the prescriptions were given by the defendant) was whether on the particular occasion, the defendant gave the prescription for a person he knew, or had good reason to believe intended to use the liquor in whole or in part as a beverage It involved the mental attitude of the defendant his knowledge his information Carpenter, a young man of 25 years a stenographer represented that he had a cold lived at a hotel and on his first visit said that he wanted a quart of whisky No one would deny that if he had repeated the representation daily securing a prescription for a half gallon of whisky each day it would be some evidence that he or some one else was using it as a beverage He did not so often secure a prescription but often enough so that a jury might be satisfied beyond doubt that the defendant knew it was not procured for medicinal purposes And as indicative of his mental attitude it was competent to prove, not only the frequency of the applications made by Carpenter, but the ease with which another by telephone, secured a prescription for a like amount of liquor

Father Liable on Verbal Promise to Pay for Services

(Mitchell vs Davis (Mo), 190 S W R 357)

The Springfield (Mo) Court of Appeals, in affirming a judgment for the plaintiff a practicing physician, says that he at the special request of the defendant, rendered medical aid to the latter's son of the value of $107 50, for which he sued and recovered judgment as the result of a jury trial The only defense was that of the statute of frauds, which requires promises to answer for the debts of others to be in writing, it being contended by the defendant that the testimony tended to prove no more than a verbal promise to pay the debt of another The son had reached his majority and was afflicted with a disease for which the plaintiff refused to give a special treatment until after the former's father consulted him and agreed to pay for the services The plaintiff testified that this agreement was entered into before and as a condition precedent to the rendition of the services These facts were denied by the testimony of the defendant and his son but the issues were properly submitted and passed on by the jury The verdict must stand in the absence of error in ruling on the admission of testimony or the giving or refusing of instructions to the jury The promise was an original one and was in no manner affected by the statute of frauds There were no objections concerning testimony, but the defendant complained of instructions given for the plaintiff and of the refusal of instructions requested by him But the court finds no reversible error The defendant was properly refused a peremptory instruction, which he requested, to find for him Two instructions were given for the plaintiff requiring the jury to find, before a verdict could be returned for him, that he rendered the services at the special instance and request of the defendant (the father), relying on his promise to pay therefor It was contended that these instructions were defective because they omitted the essentials of a consideration However when the jury found the facts stated to exist, a sufficient consideration was shown Another instruction given in behalf of the plaintiff told the jury that no extrinsic or financial value was necessary to constitute a consideration, but if the defendant hired the plaintiff and the plaintiff rendered the services, the consideration was sufficient and the defendant was liable Any trouble or labor, however slight, undertaken by one person at the request of another, will support a promise by such other person, although the trouble or labor be of no benefit to the promisor An instruction requested by the defendant and refused stated that if the plaintiff gave the son any credit during the treatment and looked to him for payment or part payment for the services, then the plaintiff could not recover against the defendant This instruction was properly refused, because the fact that the plaintiff had an agreement with the defendant on which he relied and which induced him to render the services did not thus release the son from liability therefor

Need Not Negative Exemption

(State vs Saak (Mo), 190 S W R 296)

The Supreme Court of Missouri, Division No 2, affirms a judgment of conviction of the defendant of practicing medicine without a license, in violation of Section 8315 of the Revised Statutes of Missouri of 1909 The court says that the information did not charge that the defendant was "not a physician registered on or prior to March 12, 1901," and the defendant contended that by reason of this omission the information was fatally defective But the court is unable to agree with this contention The rule of law here applicable is that when an exception is contained in a statute defining an offense, and constitutes a part of the offense, an indictment for such offense must negative the exception, but when the statute contains a proviso exempting a class therein referred to from the operation of the statute, an indictment need not negative the proviso The accused must make the exemption a ground of defense The proviso in the case at bar merely exempted a class from the operation of the statute, and falls clearly within the above announced rule

Valid Provisions of Medical Practice Act

(Louisiana State Board of Medical Examiners vs Charpentier (La), 73 So R 248)

The Supreme Court of Louisiana annuls a judgment maintaining an exception of no cause or right of action in this case brought, under Section 14 of Act 56 of 1914, to enjoin the defendant from practicing medicine without having obtained the certificate required by that statute, and to recover the pecuniary penalty thereby imposed because of his having so practiced Because Section 15 in addition authorizes a criminal prosecution for practicing medicine without having obtained the required certificate, it was contended that the statute offends the constitutional provision that no person shall be twice put in jeopardy for the same offense But the court says that the defendant had been put in jeopardy but once, and it would be time enough to consider the question of his being put twice in jeopardy should his conviction in this prosecution be affirmed and he be thereafter again prosecuted for the same offense The court also holds that Act 56 of 1914, in declaring what persons, for its purposes, shall be regarded as practitioners of medicine, and in exempting from its requirements "farmers or planters when treating without compensation their families, employees or tenants exclusively, attendants and plantation midwives, opticians fitting glasses, or testing eyes in their own establishments, water-cure establishments" and practitioners of Christian Science or the tenets of any church, does not contravene the provision of Article 48 of the constitution, which prohibits the granting, to any corporation, association or individual, of any special or exclusive right, privilege or immunity The court says that the burden rested on the defendant to show that the classification of which he complained was unreasonable, and, in the court's opinion, he had not carried that burden Farmers and planters, attendants and midwives, living on plantations, where access to those who are better qualified is difficult, and at times impossible, acquire, of necessity, a certain amount of information which enables them to act in emergencies and to deal with the simpler of the ailments which are common to humanity, when no other treatment is available, and when, in the absence of any treatment, serious consequences would result The optician is often found where the oculist is not, and may be better qualified than he to fit glasses, if not to test the eyes, is likely to inflict little or no injury in either case, and he who performs those functions in his own establishment may be regarded as more responsible than the itinerant vender The water cure is a known method of treatment from which many persons have, no doubt, derived great benefit, and which, for the protection of the public, may not require a medical education of those by whom it is administered And "the practice of Christian Science, or the religious tenets of any church," is a spiritual or psychologic matter which should, perhaps, best be left to the practitioners and their patients

---

Society Proceedings

COMING MEETINGS

Montana Medical Association, Kalispell July 11 12
Oregon State Medical Association, Portland, June 28 30
Western Roentgen Society, Kansas City, Mo, July 20 21

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Physiology, Baltimore

June XLIII No 3

1 *Return of Urea from Kidney to Blood T Addis and A E Shevky, San Francisco—p 363
2 *Comparison of Effects of Breakfast, of No Breakfast and of Caffein on Athlete and Nonathlete I H Hyde, C B Root and H Curl, Lawrence, Kan—p 371
3 *Effects of Epinephrin on Distribution of Blood Effect of Massive Doses on Outflow from Muscle R E L Gunning, Chicago—p 395
4 *Id Volume Changes and Venous Discharge in Intestine R. G Hoskins and R E L Gunning, Chicago—p 399
5 Vascularity of Suprarenal Bodies. R Burton Opitz and D J Edwards, New York—p 408
6 *Influence of Secretin on Number of Erythrocytes in Circulating Blood A W Downs and N B Eddy, Montreal, Canada—p 415
7 *Action of Ultraviolet Radiation in Killing Living Cells Such as Bacteria W E Burge, Chicago—p 429
8 *Effect of Thyroid Feeding on Catalase Content of Tissues W E. Burge, J Kennedy and A J Neill, Chicago—p 433
9 Rheotropic Responses of Epinephelus Striatus Bloch H Jordan—p 438
10 *Further Evidence Regarding Role of Vagus Nerves in Pneumonia W T Porter and L H Newburgh, Boston—p 455
11 Orokinase and Salivary Digestion Studies in Horse C C Palmer, A L Anderson, W E Peterson and A W Malcomson, St Paul, Minn—p 457
12 Application of Boyle's Law to Pulse Waves in Clinical Measurement of Blood Pressure A M Bleile, Columbus—p 475

1 **Return of Urea from Kidney to Blood**—According to Addis and Shevky, when blood is taken from the renal vein so as to disturb the function of the kidney as little as possible, it usually contains less urea than the blood sent to the kidney in the renal artery This is explained by the passage of urea from the blood to the kidney When blood is taken from the renal vein at a time when the secretion of urine has stopped, it usually contains more urea than the blood sent to the kidney in the renal artery This is explained by the passage of urea from the kidney to the blood The return of urea from the kidney to the blood whenever the kidney ceases to secrete urine, is taken as indicating that the force or forces which store urea in high concentration within the kidney must remain in continued operation to hold that accumulated urea, and do not act through the medium of any physical or chemical mechanism which would passively maintain its hold on the urea even when the active concentration of new urea from the blood had ceased

2. Effect of Food and Caffein on Muscular Work—The general results of the experiments recorded by the authors are as follows The working power of the untrained flexor muscles in a trained athlete may be increased at least three and one-half times, and the same muscle in a nonathlete three times, in one month of daily training The lack of breakfast had at first a slightly less favorable effect on the amount of work done, although the athlete always felt less fatigued working without breakfast than when working one hour after the meal After both subjects had had equal preliminary training for one month of the arm and trunk muscles on the ergometer, the athlete did more than twice the work done by the nonathlete in one and one-half the time without, and more than one and one half as much work, after eating breakfast The increase above their normal blood pressure after working either with or without breakfast was the same for both subjects, notwithstanding that the athlete did more work.

A weak dose of 1.42 gram of caffein, without work or breakfast gradually increased the pulse rate during the first hour but in the nonathlete, as a rule, only after a slight initial fall In both subjects the pulse returned to the normal rate within three hours With the larger dose 2.24 grains, under the same conditions the increase in pulse appeared more promptly but in thirty minutes was depressed below normal in the nonathlete and accelerated above the normal rate in the athlete The blood pressure rose above the normal level in one hour and frequently had not returned to the level in three hours after taking either of the doses of caffein The effects of caffein taken at different intervals before work varied with the dose and the individual In the athlete the maximum of a dose of 1.42 grain was manifested in three-quarters of an hour and in the nonathlete three hours after the dose was taken The athlete did but little more work forty-five minutes after than he did twenty minues after taking the drug But the nonathlete did two and one-half times as much work three hours after as he did twenty minutes after taking the dose

3 Epinephrin and Blood Flow from Muscle—Gunning found that epinephrin in massive dosages produces a diminished circulation in the skeletal muscles. There is a preliminary increase in the outflow due supposedly to the blood present in the vascular spaces being forced into the veins by the vasoconstriction There is a maintained secondary dilatation due probably to a fatigue of the vascular musculature The vasoconstrictor threshold was found to be lowered by an increase in the concentration of the epinephrin and by repetition of the injections

4 Effects of Epinephrin on Intestine.—The effects of epinephrin in physiologic doses were investigated by Hoskins and Gunning as regards intestine volume and venous outflow in anesthetized dogs There was no definite correlation between dosage and volume changes but dilatation predominated, particularly with larger doses Often the dilatation was preceded by contraction In some instances contraction alone occurred Infusions frequently gave only enterodilatation in animals in which injections gave a preliminary contraction The thresholds for changes in blood pressure and intestine volume were approximately the same In some cases enterocontraction coincided with vascular hypertension, but there was no constant relation between blood pressure and intestine volume changes The volume changes usually persisted after blood pressure returned to normal, indicating reflex compensatory adjustments among various organs An after dilatation of the intestine was frequently noted when the primary epinephrin effect had worn off In most cases Eck fistulas made no difference in the intestine reactions, hence the liver played no essential part. The outflow from a small cannulated intestine vein was augmented by epinephrin in all effective doses irrespective of changes of blood pressure or intestine volume. This augmentation was not due to back pressure from the portal vein or vena cava In most cases the augmentation was preceded by brief diminution in the outflow

6 Influence of Secretin on Number of Erythrocytes.—Downs and Eddy were able to produce a considerable increase in the red corpuscle count per cubic millimeter of blood by the administration of secretin, even in small doses, and by subcutaneous injection The most efficient dose is 1 c c of secretin per kilogram of body weight The increase in the count appears quickly and is very transient By repeating the dose of secretin at short intervals the increase in the erythrocyte count can be kept up for several hours, but drops promptly after the administration of the last dose The administration of secretin over a period of five days, in daily doses of 1 c c per kilogram of body weight, has very slight, if any lasting effect on the red corpuscle count in the normal animal

7 Action of Ultraviolet Radiation on Living Cells—Burge found that exposure of living cells to ultraviolet radiation of sufficient intensity to kill the cells does not decrease to any appreciable extent the activity of the intracellular enzymes Evidence is presented to show that ultraviolet radiation kills living cells by coagulating their protoplasm

8 Effect of Thyroid Feeding on Tissue Catalase—The authors found that thyroid feeding increases the catalase of the blood and decreases it in the heart and probably in the fat and skeletal muscles The increased catalase of the blood may account for the increased oxidation in animals to which thyroid is fed while the decreased catalase in the heart skeletal muscles and fat may account for the increased autolysis in these tissues the idea being that when oxidation is decreased in these tissues a smaller amount of the autolyzing enzymes is oxidized and destroyed, resulting in an increase in the rate of autolysis

10 Role of Vagus Nerves in Pneumonia.—The experiments recorded by Porter and Newburgh show that cocainizing the vagus nerves changes the violent dyspnea of pneumonia into quiet normal breathing

Archives of Pediatrics, New York

May XXXIV No 5

13 *Morbidity and Mortality of Pertussis and Measles, with Particular Reference to Age. B S Veeder St Louis.—p 321
14 *Multiple Cartilaginous Exostoses P M Stimson, St Louis—p 338
15 Institutional Care of Infants J M Brady St Louis—p 356.
16 *Frequency of Tuberculids in Infancy and Childhood and Their Relation to Prognosis T C Hempelmann St. Louis—p 362
17 Periodic Variation in Rate of Growth of Infants. A Bleyer, St Louis.—p 366
18 Report of Infectious Meningitis Developing in Babies Twenty Nine and Thirty Nine Days Old T W White St. Louis—p 372
19 St Louis as Pediatric Center G M Tuttle St Louis—p 377

13 Mortality of Pertussis and Measles—A study of the morbidity and mortality of measles and pertussis made by Veeder brings out certain factors Perhaps the most important of these is that, on an average, between 9,000 and 10,000 deaths from each disease take place annually in the United States While the death rate as a whole, and for certain diseases as tuberculosis, diphtheria, diarrhea and enteritis under 2 years and typhoid, shows a decrease in the registration area in the past fifteen years that for measles and pertussis has remained practically the same A second point is found in the age distribution of the deaths in these two conditions Nearly 80 per cent of the pertussis and over half of the measles deaths occur in infants The older the child the lower the case fatality rate The mortality of the first year of life is greater than the combined mortality of the rest of childhood A part of this—birth accidents, congenital malformations, etc.—may be termed fixed, and is irreducible but far the larger part is preventable to a certain extent. Somewhere between 5 and 10 per cent. of the mortality which may be lessened is due to measles and pertussis

14 Multiple Cartilaginous Exostoses—Stimson's patient was a 9½ year old boy, who was prematurely born at the time of his mother's menopause, and following a severe nephritis during the last two months of her pregnancy As an infant he was very weak, but after a year he appeared to be a fairly normal child except for epileptiform convulsions, which have occurred all his life, though only very infrequently of late Irregularities in his bones were first noticed at the age of 4, since when they have grown slowly and apparently become more numerous, finally involving all the long bones, the scapulae, the clavicles and the ilii His extremities also show a marked distal hypotonia. His mental age is apparently about 5 years, and the development of his carpal bones and some of his ossification centers, about that of a 6 year-old The mother and an older sister also have multiple exostoses

16 **Tuberculids in Infancy**—A study was made by Hempelmann of forty cases of tuberculosis in children showing papulonecrotic tuberculids Thirty of these were infants under 2 years of age and the other ten were distributed through the period between 2 and 12 years In a series of 130 cases of pulmonary tuberculosis in infants under 2 years of age, tuberculids occurred thirty times (23 per cent.) Sixty-two of these babies were in the first year of life, and of these, twenty-one showed tuberculids (33 8 per cent.) Sixty-eight were between 1 and 2 years of age, and nine of these (13.2 per cent) showed tuberculids In all but one of the forty cases there was evidence of lung or tracheobronchial lymph node involvement in addition to the tuberculids Tuberculids seem to bear no direct relation to prognosis, as some children are now under observation who showed tuberculids three, four and five years ago

Cleveland Medical Journal

May, XVI No 5

20 Past and Present in Abdominal Surgery J B Deaver, Philadelphia—p 315
21 Typhoid in Cleveland in 1916 M E Fulk and R G Perkins, Cleveland—p 326
22 Syphilis of Nervous System without Characteristic Symptoms or Signs T S Keyser, Cleveland.—p 337
23 Hemorrhagic Conditions of Mother and Child W, D Fullerton, Cleveland—p 342
24 Extensive Perineal Hernia and Procedure for Repair, Report of Case N M Jones, Cleveland -p 345

Journal of Bacteriology, Baltimore

May II No 3

25 Colorimetric Determination of Hydrogen Ion Concentration and Its Applications in Bacteriology W M Clark and H A Lubs, Washington, D C—p 191
26 Use of Three Per Cent Lactose Litmus Agar Plate for Demonstration of B Coli in Water Examination E M Meyer, Cincinnati—p 237
27 Simple Method for Staining Capsules of Bacteria F M Huntoon, New York—p 241
28 Curious Accident Due to Fermentation Caused by B Pneumoniae J P Simonds, Chicago—p 245
29 Fallacy of Refined Readings of Gas Percentages in Fermentation of Lactose Peptone Bile and Lactose Broth W W Browne and B Ackman, New York—p 249
30 Reaction of Paratyphoids, Alpha and Beta, in Litmus Milk P B Hadley, Rhode Island—p 263
31 Study of Diphtheroid Group of Organisms with Special Reference to Its Relation to Streptococci R R Mellon—p 269 To be continued
32 Fuchsin Aldehyd Reaction on Endo Medium G G de Bord, Ames, Iowa—p 309

Medical Record, New York

June 9, XCI, No 23

33 Pathology and Treatment of Narcotic Addiction C F Stokes, Briarcliff Manor—p 969
34 Diagnosis of Tuberculosis in Military Service G E Bushnell.—p 971
35 Alcohol in Peace and War S Baruch, New York—p 981
36 Gallbladder Disease A Ullman and M B Levin, Baltimore—p 985
37 Institutional Convalescence of Gastric and Intestinal Ulcer M E Cavallo, White Plains—p 987

New Orleans Medical and Surgical Journal

June, LXIX, No 12

38 Hypothyroidism, Report of Case S C Jamison, New Orleans—p 805
39 Multiple Cartilaginous Exostoses, Report of Cases J T O'Ferrall, New Orleans—p 808
40 Successfully Treated Fracture of Upper Third of Humerus L Sexton, New Orleans—p 813
41 Complete vs Incomplete Hysterectomy E L King, New Orleans—p 820
42 Medical Units in Field O L Pothier, New Orleans—p 825
43 Camp Sanitation and Training of Sanitary Troops W A. Love, New Orleans—p 833
44 Organization of Base Hospital H B Gessner, New Orleans—p 842
45 Pertinent Evidence Relative to Modern Views of Tuberculosis W J Durel, New Orleans—p 850

New York Medical Journal

June 9 CV, No 23

46 War's Influence on Medicine C H Mayo, Rochester, Minn—p 1057
47 Reconstructive Therapeutics J M Taylor, Philadelphia—p 1061
48 Ambulance Company W H Allen—p 1067
49 Louse Problem H C Hall, Laredo, Texas—p 1071
50 Cases of Ectopic Gestation A. J Walscheid and J C Taylor New York—p 1075
51 Hopital Francais de New York, France A M Nodine, New York—p 1077
52 Superficial Adenocarcinoma Corporis Uteri S Wiener, New York—p 1079
53 Acidosis in Children Report of Case Z Sharfin, New York.—p 1081

Ohio State Medical Journal, Columbus

June XIII No 6

54 Cancer Problem D T Gilliam, Columbus—p 394
55 Evidence of Infectious Nature of Carcinoma W B Wherry, Cincinnati—p 396
56 Malignancy in Genito Urinary Tract E O Smith, Cincinnati—p 397
57 Cancer of Uterus A Crotti, Columbus—p 399
58 Cancer of Larynx G W Crile, Cleveland—p 402
59 Cancer of Breast J C Oliver, Cincinnati—p 405
60 Surgical Treatment of Cancer of Stomach J H Jacobson, Toledo—p 407
61 Pathology of Cancer P G Woolley, Cincinnati—p 412
62 Cancer of Rectum G B Evans, Dayton—p 414

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

May 26, I, No 2943

1 Military Orthopedic Hospitals W C Mackenzie—p 669
2 *Pathology of Cardiac Dropsy C Bolton—p 678
3 *Disinfection of Drinking Water H D Dakin and E K Dunham—p 682

2 **Pathology of Cardiac Dropsy**—The accumulation of fluid in the peritoneal cavity following an incomplete obstruction of the inferior vena cava in the chest, or in uncompensated heart disease, Bolton says, is due to an increased output of lymph from the viscera, more especially the liver This increased output is constantly occurring at all stages of the disease, an increase in the amount of fluid is due to an increase in the rate of output, and the disappearance of the fluid is due to a gradual falling off of the rate of output Absorption from the peritoneal cavity by the lymphatics is occurring at all stages at the normal rate, a check being thus placed to an excessive accumulation of the ascitic fluid The fluid is therefore being continuously renewed, and there is a constant circulation of lymph from the blood into the peritoneal cavity and back again to the blood by the thoracic duct Increased absorption of tissue fluid is taking place in the abdominal wall and legs, as in the fore part of the body, but it has not been proved that the ascitic fluid is absorbed as such by the capillaries of the parietal peritoneum There is no evidence to show that the endothelial cells of the peritoneum actively absorb the fluid The increased lymph flow from the thoracic duct observed at a certain stage in the course of the dropsy is an index of increased lymph production in the abdominal organs, owing to the plethora.

3 **Disinfection of Drinking Water**—The most suitable disinfectant which Dakin and Dunham have yet found is p-sulphondichloraminobenzoic acid—$Cl_2N O_2S C_6H_4 COOH$ A concentration of 1 300,000 is sufficient to sterilize an ordinarily heavily contaminated water in about thirty minutes Such a concentration could be relied on to remove coli typhoid or cholera organisms Special experiments showed that the substance in tablet form was efficacious when acting on water contained in aluminum bottles, although a very trifling action on the metal may be observed if tablets are allowed to remain undisturbed in long contact with the metal

The concentration of disinfectant is just perceptible to the taste especially in warm water containing little organic matter but the water is perfectly palatable. One point of advantage possessed by the present disinfectant over most hypochlorite preparations is the fact that the active chlorin is less rapidly used up so that the process of disinfection continues for a longer period. Preparations of p sulphonamidobenzoic acid. Add 250 gm commercial sodium dichromate to a mixture of 200 c.c. concentrated sulphuric acid and 600 c.c. water contained in 2 liter round flask. Then add 100 gm crude toluene p sulphonamid and heat on a sand bath with reflux condenser for one hour using a small flame at first as the reaction is vigorous. On cooling wash the separated crystals well with cold water and then dissolve them in hot dilute sodium hydroxid in slight excess. Filter hot and add excess of hydrochloric acid and when cold filter off the precipitated acid and wash well with water and dry.

Preparation of p-sulphondichloraminobenzoic acid. 20 gm of p-sulphonamidobenzoic acid are dissolved in 200 c.c. approximately normal sodium hydroxid (2 mols.) warming if necessary. About 200 gm of crushed ice are then added and the mixture saturated with a rapid current of chlorin. A white rather chalky precipitate of the dichloramino acid is at once precipitated. The acid is filtered off using suction well washed with cold water and dried in vacuo on a porous plate. The dry substance is practically pure and may be powdered and preserved apparently indefinitely.

A convenient formula for tablets weighing 100 to 105 mg is to use sulphondichloraminobenzoic acid 4 per cent, sodium carbonate 4 per cent (or dried borax 8 per cent), sodium chlorid (pure) 92 per cent. The acid should be ground up with the dry sq and the sodium carbonate added subsequently. They must not be allowed to dissolve in water and subsequently titrated as then decomposition occurs. The tablets should be stored in small amber glass bottles. Tablets so prepared of the weight mentioned contain about 4 mg of the disinfectant and are suitable for the sterilization of a liter or quart of reasonably heavily contaminated water. In the case of extreme contamination a second tablet may be necessary.

Dublin Journal of Medical Science

February, CXLIII, No. 542

4 Deformity of Feet in Friedreich's Hereditary Ataxia. F. C. Purser.—p. 81
5 Case of Tuberculosis of Genital Organs Transmitted from Husband to Wife. S. Sheill.—p. 84
6 Impressions During Short Period of Active Service with Royal Army Medical Corps. W. I. de Courcy Wheeler.—p. 86
7 Fibroids and Pregnancy. B. Solomons.—p. 96
8 Cases of Excision of Elbow for Gunshot Injuries. R. A. Stoney.—p. 99

5. **Transmission of Tuberculosis of Genital Organs.**—The husband in this case had an enlarged and tender right kidney and deposits were found in the right seminal vesicle and epididymis. The reaction to tuberculin was positive. The kidney was removed very shortly afterward and it proved to be very markedly tuberculous. The wife consulted the physician at the same time as her husband made his first visit. They were then married just five weeks. Previous to her marriage she enjoyed excellent health. Her complaint was 'a tender and painful swelling in the groin,' and examination revealed three large and tender lymph glands in that region. Careful examination excluded any syphilitic or gonorrheal infection. By vagina nothing abnormal was found other than some undue tenderness in the broad ligament and ovary on the same side as the enlarged glands. A von Pirquet test proved positive, and a little later she showed a positive reaction to tuberculin injection. She underwent a course of tuberculin injections during which all signs and symptoms of her disease abated. This is well over a year ago now and she remains apparently cured.

Glasgow Medical Journal

May, LXXXVII, No. 5

9 Modern Developments of Radium and Roentgen Ray Therapeutics. J. Macintyre.—p. 257
10 Causes of Still Birth. J. M. M. Kerr.—p. 283

Indian Medical Gazette, Calcutta

April, LII, No. 4

11 Abdominal Surgery at Miraj Hospital. W. J. Wanless.—p. 121
12 Cesarean Section for Dystocia Due to Osteomalacia. F. J. Neve.—p. 127
13 Pneumonia. Jamal U Din.—p. 129
14 Case of Hernia (with Obstruction) into Lesser Sac of Peritoneum. M. Corry.—p. 130
15 Case of Multiple Chondromata. M. P. Atwe.—p. 130

Journal of Laryngology, Rhinology and Otology, London

May, XXXII, No. 5

16 Causation and Prevention of Educational Deafness. M. Yearsley.—p. 145
17 Vincent's Disease of External Ear Occurring in Course of Chronic Middle Ear Suppuration. R. T. Mather.—p. 153

Lancet, London

May 26, I, No. 4891

18 Campaign Against Syphilis. W. Osler.—p. 787
19 Blood Change in Gas Poisoning. J. Miller.—p. 793
20 Trench Fever. H. M. McCrea.—p. 796
21 Surgical Uses of Ozone. C. Stoker.—p. 797
22 Crystallo-Chemical Analysis and Its Use in Medicine. T. V. Barker.—p. 798
23 Two Cases of Spontaneous Rupture of Spleen. G. G. Turner.—p. 799
24 Primary Suture and Union of Operation Wounds of Urinary Bladder. A. R. Thompson.—p. 801
25 Case of Syphilitic Peripheral Neuritis. H. F. Thorne.—p. 802
26 Case of Fulminating Meningococcus Septicemia. F. C. Pybus.—p. 803
27 Difficulties in Administrative Control of Tuberculosis. J. Guy.—p. 812

19. **Blood Change in Gas Poisoning.**—The blood in forty-four cases of gas poisoning was studied by Miller. He now says that in cases of gas poisoning in which symptoms persist, there is an increase in the number of lymphocytes relative and absolute in the circulating blood. In slight cases this may not be beyond the normal limits or in excess of what may be met with from other causes. In any marked case, however, the change is sufficiently striking to be of some importance in cases in which the medical officer is in doubt as to the reliance to be placed on the statements of men complaining of having been gassed. The blood change is elicited by a differential count of the leukocytes and if the percentage of lymphocytes approaches that of the polymorphonuclear leukocytes it indicates that the patient is still suffering from the effects of the gassing, that is provided there is no other complicating disease present which might produce a similar change. The cell which is increased is the ordinary small lymphocyte of the blood. There may be in some cases a diminution in the number of polymorphonuclear leukocytes which will, of course, accentuate the sign but the increase of lymphocytes is an absolute one. Moreover it appears in cases with a high leukocyte count. The change is one which develops early, probably within a month of the gassing and continues for a long time, in cases with persistent symptoms, for at least eighteen months. The change appears to be independent of the kind of gas and it is shown by patients exhibiting many varieties of symptoms. It is not clear what the change is due to but Miller suggests that it is probable that chronic inflammatory change in respiratory and gastric mucous membranes is at least a factor.

21. **Surgical Uses of Ozone.**—Stoker analyzes the results obtained in seventy-nine cases treated according to his method. In almost all the cases healing was hastened. It is emphasized that ozone will disclose the presence of (*a*) dead bone, (*b*) foreign bodies, (*c*) septic deposits and it is useless to suppose ozone can effect healing till these conditions have been dealt with by the surgeon. The usual changes that take place in the discharges are as follows: (1) increase of pus; (2) decrease and disappearance of pus, which (3) is replaced by clear serum which (4) eventually becomes reddish in color. The length of time for which the ozone is used depends on the size of the surface to be treated. The maximum time is about fifteen minutes.

24. **Primary Suture and Union of Wounds of Urinary Bladder.**—In thirteen cases of suprapubic prostatectomy, removal of a vesical growth, and retrograde catheterism Thompson made primary suture of the bladder wall and super-

ficial tissues The method adopted by him is employed after the actual disease is removed and steps are taken to control and prevent hemorrhage The bladder is filled with gauze sponges saturated with hot boric solution at a temperature of 120 F After a little time the sponges are removed and liquor hamamelidis, B P, at a similar temperature is poured into the bladder and allowed to remain there The quantity used is about 3 ounces A coude catheter is then inserted into the bladder via the urethra, especial care being now taken that the wound shall not be contaminated, the wound being covered with cyanid gauze The point of the catheter is laid carefully in the bladder, about one third up the vertical height of the bladder, and the position of the catheter at this level in its relations to the meatus is carefully noted for future use, as a catheter may slip even when tied apparently securely, and it is important that it should not do so unknown to the surgeon or his assistants

The bladder wound is then exposed, and sutures are applied as follows the two ends of the incision in the bladder are secured with Lane's forceps, and the edges slightly everted, fine catgut sutures are then placed through the muscle wall of the bladder, as close to the mucous membrane as possible, but not through it. Each suture is tied immediately after it is passed, but not cut until all are tied, as tension on them helps to steady the bladder About six or seven sutures are thus inserted, tied and cut The sutured part is carefully palpated in order that any holes left by suturing may be discovered and closed The fibrous and outer muscular coats of the bladder are now secured with thicker catgut Lembert sutures, and carefully tied, especial care being taken, as before, with the lower part of the wound The number of sutures is, as before, six or seven A small gauze wick is placed in the space of Retzius, after this space has been carefully washed with boric solution If the peritoneum has been retracted upward it is brought back into its original position on the front of the bladder, or even "encouraged" down a little lower The abdominal wall is then sewn up with two rows of catgut sutures

Archives de Médecine des Enfants, Paris

April XX, No 4, pp 169 224

28 *The Chemical Reactions of the Cerebrospinal Fluid in Differentiation of Tuberculous Meningitis J Golay—p 169
29 *Meningitis in the Course of Mumps Simulating Severe Meningococcus Cerebrospinal Meningitis M Lavergne—p 182
30 *Meningococcus Iridochoroiditis, Three Cases M Lavergne—p 189
31 A Case of Meningococcus Iridochoroiditis and of Cyclitis H Collette—p 194
32 *Acute Poliomyelitis J Comby—p 198

28 **Differential Reactions in the Cerebrospinal Fluid in Children**—Golay tabulates the findings in fourteen cases of meningitis in children They show a remarkable uniformity in each of the three groups the "meningeal states," syphilitic meningitis, and tuberculous meningitis The cell count had nothing characteristic of either group, varying widely in all, but the albumin content and the chlorid content are extremely instructive Instead of the normal 0 1 or 0 2 per thousand, the albumin was 1 or 2 gm per thousand in the tuberculous cases The chlorid content, on the other hand, was always low in these cases, only 5 5 or 6 5 per thousand, while in other meningeal states or meningitis it kept at the normal figure 7 gm per thousand or above, 7 5 per thousand

29 **Mumps Meningitis**—Lavergne's patient was a boy of 9 and the symptoms of meningitis preceded those on the part of the salivary glands This suggests the possibility that certain conditions described as "meningeal states" may possibly have been pertussis meningitis with which the inflammation of the parotid glands was too slight to attract attention In the case reported the clinical picture when the child was first seen was that of acute epidemic meningitis He had vomited three days before the meningitis symptoms had become manifest The cerebrospinal fluid was found limpid, but with high albumin content. The temperature was 39 C but the pulse was 72, full and regular

30 **Meningococcus Iridochoroiditis**—The three cases reported emphasize the necessity for watching over the eyes during cerebrospinal meningitis to detect ocular complications in their incipiency Lavergne insists that at the least suspicion of iridochoroiditis, ophthalmoscopic examination is imperative and, if the diagnosis is positive, then antimeningococcus serum should be injected immediately into the vitreous body This is the only treatment known to date, he reiterates, that has realized unmistakable benefit In the three cases here described it came too late to save vision in that eye in one child of 11 months, the second child, 13 months old, died, and the third, 5 years old, was left with much impaired vision in that eye

32 **Acute Poliomyelitis**—Comby here gives a translation of the articles read at the recent symposium on poliomyelitis at New York. He remarks in conclusion that acute poliomyelitis has never appeared at Paris in epidemic form Cases are rare and always sporadic, and the differential diagnosis at first is almost impossible In nine out of ten cases it is a question of meningitis, and only the outcome classifies the case In the incomplete forms, influenza, growth or gastric fever are incriminated, and if there does not happen to be any paralysis, the poliomyelitis escapes recognition There may be coxalgia or dorsal localization of the disease, suggesting Pott's disease, and it may be long before poliomyelitis is retrospectively diagnosed In every case, prophylactic measures would come too late But when the disease is epidemic everything grows clear "American physicians," he adds, "are thus better placed for diagnosing acute poliomyelitis, and the preventive measures they have inaugurated with characteristic decision would be premature and objectless at Paris"

Bulletin de l'Académie de Médecine, Paris

May 8, LXXVII, No 19, pp 575 698

33 Decalcification after War Wounds E Delorme—p 577
34 Total Laryngectomy, Fifteen Cases R J Moure—p 586
35 *Dangers from Arsenobenzol Treatment in Tabes and General Paralysis J Lepine—p 588
36 Treatment of Stiff Joints (Sur le traitement des enraidissements articulaires de cause fibreuse centrale ou periphérique.) H Guilleminot—p 589
37 Physical Measures in Treatment of Incipient Muscular Contraction and Fibrous Retraction H Guilleminot—p 593
38 *Cerebellar Syndrome after Wound of Inferior Vermis A Leri—p 596

35 **Dangers of Salvarsan and Its Substitutes in Treatment of Tabes and General Paralysis**—Lepine remarks that about twenty years ago tabes began to be less frequent, while the course was milder than had formerly been the average Vigorous mercurial treatment was evidently a factor in this On the other hand, it has been his impression during the last three years that tabes is increasing in frequency, in severity, and the interval between the infection and the tabetic symptoms is shorter He warns further that men with shell shock may present symptoms resembling those of progressive paralysis He knows of instances in which arsenobenzol was given on this erroneous diagnosis, with disastrous effect Nothing could be a greater mistake in such cases

38 **Topography of Cerebellar Functions**—In Leri's case a bullet was found sticking perpendicularly in the skin, 1 5 cm below the external occipital prominence and just to the left of the median line There was evidently only a superficial lesion of the inferior vermis, but the man developed the complete cerebellar syndrome, the symptoms being those of both the Duchenne and the Babinski clinical picture, but affecting the legs exclusively This suggests the existence in the cortex of the vermis of a center controlling the coordinated movements of the legs A number of other instructive points in the topography of the cerebellum are brought out by this case.

Le Nourrisson, Paris

March, V, No 2, pp 65 128

39 *Adenoid Vegetations in Infants and Their Causes A B Marfan—p 65
40 Historical and Critical Study of Affections of Digestive Apparatus in Infants A B Marfan—p 91
41 Infant Feeding from the Standpoint of Recent Works on Vitamins, Deficiency Diseases and Unbalanced Dietaries E. Apert—p 110
42 *Lumbar Puncture in Infants M Lavergne—p 118

39 **Adenoids in Young Infants.**—Martin declares that when adenoids develop in infants under 3 months old, inherited syphilis is exclusively responsible for them and even up to the age of 2 it is a frequent factor. They may thus prove corroboratory evidence of the inherited taint. In the other children, tuberculosis or chronic digestive disturbance or protracted or recurring bronchopneumonia were evidently the main factors. Any chronic infections or intoxications at a certain period of development may entail hyperplasia of pharyngeal lymphoid tissue, as also rachitis. This explains their frequent coincidence with rachitis. An infant with hypertrophied adenoids is liable to snore during inspiration. The snoring does not stop when the nostrils are pinched together, but the child begins to suffocate if its mouth is forcibly closed. The child with its air passages permanently obstructed is unable to nurse properly and there may be a slight intermittent or spasmodic cough. The ears should be examined with care, as an unsuspected otitis media may complicate the adenoids. Certain infants lose their hearing in consequence, and it is not discovered that they are growing up deaf mutes until they get to be nearly 2 years old. It is probable that adenoids have been overlooked in many infants with syphilitic coryza. Specific treatment has a favorable action on the adenoids of syphilitic infants. It is more effectual the younger the child. Under 6 months the effect may be so pronounced that it may not be necessary to remove the adenoids. He has generally applied mercurial inunctions in treatment but in three recent cases he gave arsenobenzol with equally favorable results, in one case the adenoids disappeared completely in three weeks.

Marfan warns against thorough operative removal of the adenoids under 4 on account of the danger of recurrence, almost inevitably fatal. But part can be snipped off and give great relief. In one case a fragment the size of a bean was clipped off with forceps. Respiration was much improved but blood oozed for two weeks, a guinea-pig injected with the tissue developed typical tuberculosis. General treatment is necessary and he has given calcium and epinephrin with good results both for the bone and the lymphatic tissues. He gave from 0.10 to 0.25 gm. calcium glycerophosphate with the first feeding of the day. At noon and night, before feeding he gave 2 or 3 drops of a 1 per thousand solution of epinephrin in a little water. This treatment was given systematically for two weeks in each month. The epinephrin by the mouth may induce diarrhea. With a syphilitic child it may be well to follow the specific treatment with this tonic medication. For children who do not catch cold readily and have no eruptions, he orders a salt bath at 35 C. for six or ten minutes twice a week, rubbing the skin after drying, with a woolen glove wet with a little alcohol. Children inclined to ear trouble had better not be sent to the seashore, but sea air is beneficial for others. For local treatment, a few drops of a mixture of 0.5 gm. eucalyptol in 30 gm. fluid petrolatum may be introduced into each nostril two or three times a week. In case of syphilis a calomel salve can be used. With acute adenoiditis he instils three times a day 5 or 6 drops of a 1 per cent. solution of colloidal silver.

42 **Lumbar Puncture in Infants.**—Lavergne discusses the reasons why the fluid sometimes does not flow after lumbar puncture in infants. If there is no escape of fluid from a lumbar puncture on a line passing through the iliac crests the permeability of the needle should be tested. If the fluid does not flow after waiting for fifteen seconds, he advises puncturing again in the space above, leaving the first needle in place. This often starts the flow through the first needle. But if this fails he punctures at once between the first and second lumbar or twelfth dorsal and first lumbar vertebrae. This has always brought fluid in his experience, and he has never had the least untoward incident from this high rachicentesis.

Policlinico, Rome

May XXIX Medical Section No. 5 pp. 189-228

43 War Wounds of the Brain and Spinal Cord. G. Mingazzini.—p. 189. Commenced in No. 4.
44 *Sensory Disturbances in Incipient Typhoid. A. Marina.—p. 204.
45 Lice in the Epidemiology of Epidemic Meningitis. I. Pizzini.—p. 212.

44. **Sensory Anomalies in Beginning Typhoid.**—In Marina's case the typhoid came on with severe cerebral symptoms, and the young man was left with right hemiparesis, and complete anesthesia of that side with loss of the sense of position of the limbs and neck but not of the trunk, astereognosis and loss of the sense of direction when the skin was pulled. Pressure on the skin is perceived and correctly located, and this is the only sensory perception left on this right side.

45. **Lice and Meningitis.**—Pizzini writes from Bergamo to call attention to the connection between body lice and the cases of cerebrospinal meningitis in two recent epidemics there. There were seventy-seven cases in all. The nasopharyngeal secretions were always found free from meningococci but they were cultivated from the blood even late into convalescence. The positive blood findings sometimes alternated with two or three negative findings. He describes the experience in a number of cases in detail, and urges in prophylaxis measures to eradicate lice, with isolation of the patient until no further meningococci are found in the blood. In conclusion he warns that the darkness and lack of cleanliness in low grade moving picture shows facilitate transmission of vermin to the crowds frequenting them.

Riforma Medica, Naples

April 23 XXXVIII No. 17 pp. 449-476

46 *Blood Diseases and the Spleen. A. Ferrannini.—p. 449.
47 Acute Transient Leukemia. G. Costantini.—p. 454.
48 Tetanus Localized in Wounded Limb: Two Cases. E. Colombino.—p. 461.
49 Recurring Abscesses in Neck from Carious Tooth. B. de Vecchis.—p. 463.

46. **The Spleen and Disease of the Blood.**—In the history of what we know of the connection between the spleen and blood diseases the Italians take a prominent place. Banti proposed splenectomy for splenic anemia as early as 1882, and in the eighties Bizzozero, Foa and others described the reversion of the spleen to the embryonal type as a blood-producing organ. Banti in 1894 described the disease now known by his name, and Rummo later described the other forms of morbid relations between the spleen and liver. Cardarelli's publications on infantile splenic pseudoleukemia date from 1880. Fede insisted on its infectious character, and Pianese in 1905 discovered the Leishman protozoon in children with splenic anemia. Jemma reported that he had found leishmaniosis in 65 children among 7,000 examined at Palermo while there were only 25 cases of typhoid and 20 of malaria; in 1913 he encountered 102 cases. In 1915 Di Cristina and Caronia applied tartar emetic in this disease as this drug seems to have proved its value with tropical ulcer. The results were extremely favorable, as also with a similar drug (sodium acetyl-p-aminofenilstibiato) which can be injected intramuscularly without local irritation.

Rivista Critica di Clinica Medica, Florence

May 13 XXIII No. 19 pp. 213-240

50 *Functional Tests of Different Parts of the Heart Separately. (Le reazioni del tono muscolare delle singole cavita cardiache e il loro determinismo fisio-patologico.) C. Minerbi.—p. 213. Commenced in No. 13, p. 145.

50. **Functional Tests of Auricle and Ventricle Separately.**—Minerbi is instructor in medical semeiology at the University of Rome and he here reviews the various methods by which the functional capacity of the heart and of its component parts can be estimated. He calls attention in particular to the prompt retraction of the sound heart when the precordial region is tapped along certain specified lines. This tapping with twenty strokes of the hammer and pleximeter is followed by retraction of the auricle, atrium or ventricle according as one or the other is nearest to the line of strokes. The outline of the auricle, atrium or ventricle will then be found 1, 2 or even more centimeters inside of the previously drawn outline. In his tests on normal persons, the retraction thus realized often amounted to a total of 4 cm. for the entire heart in the course of three minutes. The retraction is

evidently due to the direct or autonomic excitability of the muscle tissue, independent of the diastole proper By this means he has learned that the auricle and the atrium can contract independently of each other as well as of the ventricle Another instructive test is a modification of the Azoulay-Varisco test The subject reclines horizontally, without a pillow, and the extended legs are slowly raised by an assistant to an angle of 75 or 80 degrees, the subject entirely passive The pulse, pressure and limits of the heart are then recorded anew Then the assistant releases the legs, and the subject lowers them very slowly to the bed, taking five or eight seconds for this It requires considerable muscular effort to keep from dropping the legs, and the pressure, etc, are recorded anew In his research with 600 applications of these various tests on thirty persons, including both sick and normal subjects, he found that with the Azoulay-Varisco test the sound heart reacted exclusively with pronounced retraction of the auricles With a weak heart muscle, the auricles became enlarged at once, instead of contracting and with extreme weakness the ventricles also became enlarged The behavior of the heart under reflex action from the skin is also instructive as he relates in detail, discussing the mechanisms of the various muscular reactions of the heart They all demonstrate, he says, a delicate and effectual autoregulating mechanism in the heart

Prensa Medica Argentina, Buenos Aires

April 30, III, No 33, pp 353 364

51 *Metastases in Rectum and Ovary of Gastric Carcinoma M R Castex —p 353
52 Histologic Transformation of a Transmissible Tumor in White Rat A H Roffo —p 357
53 Inefficacy of Haptinogenina Difterica in Experimental Diphtheria R Kraus and A Sordelli —p 359
54 Exarticulation of the Shoulder under Local Anesthesia F Chiossone —p 360

51 **Metastases of Gastric Cancer** —Castex once diagnosed a cancer in the stomach by palpation of metastatic bunches in the pouch of Douglas Payr, Toyosumi and others have reported cases in which metastasis in the rectum was the first sign of a cancer in the stomach When there is stomach disturbance and symptoms on the part of the genital sphere, there is strong probability of malignant disease of the stomach with metastasis in the ovaries Metastasis in the rectum or pouch of Douglas is easier to detect. He remarks that no instance is on record of metastasis in the rectum from cancer elsewhere than in the stomach, with the single exception of Schnitzler's case in which the primary cancer was in the pancreas He reproduces the macroscopic and microscopic findings in a case of pararectal metastasis in the fundus of the pouch of Douglas, and in two with metastasis in both ovaries In some of the cases on record and in his own experience the metastasis was discovered early enough to permit successful excision of the primary malignant focus

Brazil-Medico, Rio de Janeiro

April 14, XXXI, No 15 pp 121 130

55 Research on Some Helminths in the Paulista Museum L Travassos —p 121
56 *Chiggers. (O micuim) E von Bassewitz —p 122 Commenced in No 14, p 115
57 Methylene Blue in Treatment of Tropical Phagedenic Ulcer F Silva —p 124

April 21, No 16, pp 131 138

58 Disadvantages of Mugnai's Method of Inguinal Herniotomy C Wernecl —p 131

56 **Chiggers** —Bassewitz quotes a traveler's description, dated 1820, of the tormenting itching caused by the minute red insects known as "micuims" in Brazil and as "red lice," "chiggers" or "jiggers" elsewhere Bassewitz knows a man and his mother who are never affected by the chiggers, both have familial cholemia He has not been able to demonstrate salivary glands in the insects but is confident that they secrete an irritating fluid which induces afflux of lymph wherever they implant their mouth This the insect sucks, no corpuscles have been found in them after they have been biting a person He recommends benzin or an alcoholic tincture of Peruvian balsam for local application This kills them at once and they can be removed without leaving the head embedded in the skin A tincture of pyrethrum is also useful both for this and to ward them off Mentholated petrolatum is recommended also, it has the additional advantage of soothing the intense pruritus which is liable to last for some time after the insects are gone Among the household remedies much used are rubbing with rum or an alcoholic maceration of tobacco leaves In dogs and other animals the insects are found mainly around the eyes and in the ears The nervous irritation from them may induce actual mania or fits in the animals Chiggers may also cause havoc in the poultry yard, the accumulations of larvae under the wings and around the anus suggesting an eruption with scabs Bassewitz advises burning over the fields affected, as is done to eradicate ticks in Rocky Mountain districts, saying that this might aid at the same time in eradicating certain other causes for cattle ills

Russkiy Vrach, Petrograd

XVI, No 7, pp 145 168

59 Syphilitic Pemphigus in Adults V I Terebinsky —p 145
60 Influence of Sulphur Saline Waters on General Metabolism (Machestinskikh istochnikov) V I Slovtsoff and A N Tchernevsky —p 147 Concluded
61 Thoracotomy for War Wounds of the Chest, Thirty Six Cases. V M Mintz —p 150 Thirty Two Cases. A. B Eisenstein —p 155
62 Burns in Children N R. Blumenau —p 158 To be continued
63 One Kidney Low in Pelvis (Dystopia renis congenita.) T A. Tsieshkovsky —p 162

Finska Lakaresallskapets Handlingar, Helsingfors

November, 1916, LVIII, No 11, pp 1583 1753

64 Research on the Flow of Blood from the Left Heart into the Arteries R Tigerstedt —p 1583
65 *Influence of Epinephrin on the Leukocyte Blood Picture in Man H Castren —p 1605
66 Traumatic Aneurysms, Four Cases T Kalima —p 1638
67 Myoma or Adenomyoma in the Posterior Vagina, Three Cases. B Nyström —p 1657
68 *Ultimate Outcome of Operative Cases of Mammary Cancer M Sirala —p 1677

65 **Influence of Epinephrin on the Leukocyte Count.**—Castren investigated the changes in the leukocyte blood picture after injection of epinephrin, in twenty-four persons, including two healthy subjects The changes were practically identical with those in his own leukocyte blood picture after muscular exercise, they seem to be traceable to a similar causal mechanism in each In one case of myeloid leukemia with much enlarged spleen, the spleen increased distinctly in size after the injection of the epinephrin, but this extra enlargement was briefly transient

68 **Fate of Patients with Mammary Cancer after Mammectomy** —Sirala has been able to trace for several years 94 per cent of 134 operative cases of cancer of the breast An inherited predisposition was possible in 16 per cent. and there had been mastitis in 12 per cent , 21 1 per cent of the total 134 are apparently permanently cured In 33 3 per cent. of the cases the operation followed in less than three months after the discovery of the tumor, and 11 of these 33 women are in good health to date With an interval of six months, only 7 of the 27 are still living, with an interval of a year, only 5 of the 35, two years, only 3 of 21, and over two years, only 2 of 17 Only 18 are still in good health after a five-year interval Recurrence occurred within the first year in 2, second, 2, third, 4, fourth, 1, and fifth, 2 Of the total 134 operative cases from 1897 to 1910 the cancer was found beyond relief in 12 per cent.

Ugeskrift for Læger, Copenhagen

April 19, LXXIX No 16 pp 605-646

69 Clinical and Roentgenologic Study of Chronic Habitual Constipation IV T E H Thaysen —p 605 Continuation
70 *Determination of Specific Gravity of Organs (En simpel Metode til Vægtfyldebestemmelse af Organer) V Ellermann —p 614

70 **Specific Gravity of Organs** —The scrap of tissue floating on the surface of a 10 per cent. salt solution in a graduated glass sinks to the bottom when more water is poured in to dilute the saline The amount of dilution required to bring this about is the index of the specific gravity

JOURNALS ABSTRACTED IN THE CURRENT MEDICAL LITERATURE DEPARTMENT, JANUARY-JUNE, 1917

The following journals have been abstracted in the Current Literature Department of The Journal during the past six months Any of the foreign journals, except those starred, will be lent by The Journal to subscribers in the United States and to Fellows of the American Medical Association for a period not exceeding three days Only one journal may be borrowed at a time Requests for periodicals should be addressed to the Library of the American Medical Association and six cents in stamps should be enclosed This covers the average expense of mailing a journal Domestic journals can be obtained by sending the approximate amount direct to the respective publishers Thus most of the journals indexed are accessible to the general practitioner, no matter where he may be located

American Journal of Anatomy Bi m $7 50 36th St and Woodland Ave, Philadelphia.
American Journal of Diseases of Children M $3 American Medical Association 535 N Dearborn St Chicago
American Journal of Insanity Q $5 Johns Hopkins Press Baltimore
American Journal of the Medical Sciences M $5 Lea & Febiger 706 Sansom St Philadelphia
American Journal of Obstetrics and Diseases of Women and Children M $5 William Wood & Co 51 Fifth Ave New York
American Journal of Orthopedic Surgery M $4 126 Massachusetts Ave Boston
American Journal of Physiology M $5 Johns Hopkins Medical School Baltimore
American Journal of Public Health M $3 126 Massachusetts Ave, Boston
American Journal of Roentgenology M $5 67 E 59th St New York.
American Journal of Syphilis. Q $5 C V Mosby Co, St. Louis
American Review of Tuberculosis M $3 2419 Greenmount Ave, Baltimore.
Annales de gynecologie et d obstetrique M 22 francs Paris
Annales de medecine M 23 francs Paris.
Annals of Ophthalmology Q $4 Mermod Jaccard Bldg St Louis
Annals of Surgery M $5 J B Lippincott Co, 227 S 6th St Philadelphia
Annals of Tropical Medicine and Parasitology Q $5 Liverpool
Archiv fur klinische Chirurgie Irregular Price varies. Berlin
Archives of Diagnosis. Q $2 Rebman Co 141 W 36th St New York
Archives of Internal Medicine M $4 American Medical Association 535 N Dearborn St. Chicago
*Archives de medecine des enfants. M 18 francs Paris
Archives des maladies de l appareil digestif et de la nutrition M 14 francs. Paris
Archives des maladies du cœur des vaisseaux et du sang M 17 francs. Paris.
Archives medicales Belges M 18 francs Paris.
Archives of Ophthalmology Bi m $5 G P Putnam s Sons 2 W 45th St. New York.
Archives of Pediatrics. M $3 E. B Treat & Co 241 W 23d St, New York.
Archives of Radiology and Electrotherapy M $5 London
Beitrage zur klinischen Chirurgie Irregular Price varies. Tubingen
Berliner klinische Wochenschrift W 24 marks. Berlin
Boston Medical and Surgical Journal W $5 126 Massachusetts Ave. Boston
Brazil Medico W 20 milreis. Rio de Janeiro
Bristol Medical and Chirurgical Journal M. 6s Bristol.
British Journal of Children s Diseases Q $5 London
British Journal of Ophthalmology M 31s. 6d London
British Journal of Surgery Q $6 50 William Wood & Company 51 Fifth Ave. New York
British Journal of Tuberculosis. Q $1 25 G E. Stechert & Co 151 W 25th St New York.
British Medical Journal W $10 London
Bulletin de l Academie de medecine W 20 francs Paris.
Bulletin of the Johns Hopkins Hospital M $3 Baltimore
Bulletin of the Lying in Hospital of the City of New York Irregular $1 23 E. 93d St New York.
Bulletin of the Medical and Chirurgical Faculty of Maryland M $0.25 1211 Cathedral St. Baltimore
California State Journal of Medicine. M $1 Butler Bldg San Francisco
Canadian Medical Association Journal M $5 386 Victoria St. Toronto
Cleveland Medical Journal. M $2 2318 Prospect Ave., Cleveland
Colorado Medicine M $2 Metropolitan Bldg Denver
Correspondenz Blatt fur schweizer Aerzte W 22 francs. Basel
Cronica Medica Semi m 6 soles. Lima Peru.
Delaware State Medical Journal M $1 Wilmington.
Deutsche medizinische Wochenschrift W 32 marks Berlin
Dublin Journal of Medical Science M $5
Edinburgh Medical Journal M $6
*Finska Lakaresallskapets Handlingar M Helsingfors
Gazzetta degli ospedali e delle cliniche Semi m 25 *francs* Milan
Glasgow Medical Journal M $5
Grece medicale Semi m 12 francs Athens
Hospitalstidende W 7 5 kroner Copenhagen
Hygiea M $5 *Stockholm*
Illinois Medical Journal M $2 3333 Ogden Ave Chicago
Indian Journal of Medical Research Q 10s Calcutta
Indian Medical Gazette M $5 Calcutta
Journal de chirurgie M 44 *francs* Paris
Journal de medecine de Bordeaux M 15 francs
Journal de radiologie et d electrologie M 28 francs Paris
Journal of Abnormal Psychology Bi m $4 R G Badger 194 Boylston St Boston
Journal of the American Medical Association W $5 535 N *Dearborn St Chicago*
Journal of the Arkansas Medical Society M $1 810 State Bank Bldg Little Rock Ark
Journal of Bacteriology Bi m $5 Williams & Wilkins Company, Baltimore
Journal of Biological Chemistry M $3 2419 Greenmount Ave Baltimore
Journal of Cancer Research Q $5 Williams & Wilkins Company Baltimore
Journal of Cutaneous Diseases M $5 W M Leonard, 101 Tremont St Boston
Journal of Experimental Medicine M $5 Rockefeller Institute for Medical Research 66th St and Avenue A New York
Journal of the Florida Medical Association. M $1 334 St James Bldg Jacksonville Fla
Journal of Immunology Bi m $5 Williams & Wilkins Company Baltimore
Journal of the Indiana State Medical Association M $2 406 W Berry St Fort Wayne Ind
Journal of Infectious Diseases. M $5 629 S Wood St Chicago
Journal of Iowa State Medical Society M $2 *Des Moines Ia*
Journal of Kansas Medical Society M $2 303 Commerce Bldg, Topeka Kan
Journal of Laboratory and Clinical Medicine M $3 C. V Mosby Company St Louis
Journal of Laryngology Rhinology and Otology M $5 London
Journal of Maine Medical Association M $2 Portland Maine
Journal of Medical Association of Georgia M $1 Harison Bldg, Augusta Ga
Journal of Medical Research Bi m $4 240 Longwood Ave Boston
Journal of Medical Society of New Jersey M $2 12 Cone St Orange, N J
Journal of Michigan State Medical *Society* M $3 50 Power s Theatre Bldg Grand Rapids, Mich
Journal of Missouri State Medical Association M $2 3517 Pine St St. Louis.
Journal of Nervous and Mental Diseases M $8 64 W 56th St New York.
Journal of Oklahoma State Medical Association M $2 Muskogee
Journal of Parasitology Q $2 Urbana Ill
Journal of Pathology and Bacteriology Q $5 50 Cambridge England
Journal of *Pharmacology* and Experimental Therapeutics. M $5 2419 Greenmount Ave. Baltimore
Journal of South Carolina Medical *Association* M $2 Greenville S C
Journal of Tennessee State Medical Association M $2 Doctor s Bldg Nashville Tenn
Journal of Tropical Medicine and Hygiene Semi m $5 London
Journal of Urology Bi m $5 Williams & Wilkins Co Baltimore.
Journal Lancet Semi m $2 839 Lumber Exchange Minneapolis
Kentucky Medical Journal. M $2 State and *Twelfth* Sts. Bowling Green, Ky

W—Weekly M.—Monthly Semi m.—Semi monthly Bi m—Bi monthly, Q—Quarterly *Cannot be loaned.

Lancet W $10 London
Laryngoscope M $5 3858 Westminster Place, St. Louis
Lyon chirurgical M 25 francs.
Lyon medical M 15 francs
Medical Journal of Australia W 6 d Sydney
Medical Record W $5 W Wood & Co, 51 Fifth Ave, New York.
Medizinische Klinik W 32 marks Berlin
Mental Hygiene Q $2 National Committee for Mental Hygiene, Concord, N H
Military Surgeon M $3 50 Seventh and B Streets, S W, Washington, D C
Mitteilungen aus der medizinischen Fakultät der Kaiserlichen Universität Kyushu Irregular Price varies Fukuoka
Mitteilungen aus der medizinischen Fakultät der Kaiserlichen Universität zu Tokyo Irregular Price varies Tokio
Modern Hospital M $3 Metropolitan Bldg, St. Louis
Monatsschrift für Kinderheilkunde M 30 marks Berlin
Münchener medizinische Wochenschrift W 32 marks Munich
Nebraska State Medical Journal M $2 00 468 Brandeis Bldg, Omaha
Nederlandsch Tijdschrift voor Geneeskunde W 10 50 florins Amsterdam
New Mexico Medical Journal M $2 P O 23, Las Cruces, N M
New Orleans Medical and Surgical Journal M $2 1551 Canal St, New Orleans
New York Medical Journal W $5 A R Elliott Publishing Co, 66 W Broadway, New York
New York State Journal of Medicine M $1 17 W 43d St, New York
Norsk Magazin for Lægevidenskaben M $5 Christiania
Northwest Medicine M $2 Cobb Bldg, Seattle, Wash
*Nourrisson Bi m 14 francs Paris
Ohio State Medical Journal M $2 Physician's Bldg, Columbus, Ohio
Ophthalmic Record M $4 7 W Madison St, Chicago
Ophthalmology Q $5 708 Cobb Bldg, Seattle, Wash.
Paris médical W 16 francs.
Pediatria M 20 lire Naples
Pennsylvania Medical Journal M $2 Athens, Pa
Policlinico W 32 lire Rome
Practitioner M $6 50 London
Prensa medica Argentina. Semi m 25 francs. Buenos Aires.
Presse medicale Semi w 15 francs Paris
Praktitcheskiy Vrach W 7 rubles Petrograd
Progrès médical W 12 francs. Paris
Psychiatric Bulletin Q $2 New York State Hospital Commission Albany
Public Health Journal M $2 York Publishing Co, Lumsden Bldg, Toronto
Quarterly Journal of Medicine $6 50 London
Revista de la Asociacion Medica Argentina M Buenos Aires.
Revue de Chirurgie. M 33 francs Paris.
Revue medicale de la Suisse romande M 14 francs Geneva.
Rhode Island Medical Journal M $2 Providence
*Riforma medica W 35 50 lire Naples
Rivista critica di Clinica Medica. W 16 lire. Florence
Russkiy Vrach W 13 rubles Petrograd.
Sei I Kwai M $2 Tokio
*Semana medica W $5 Buenos Aires.
Siglo Medico W 20 pesetas Madrid
Southern Medical Journal M $3 807 Empire Bldg, Birmingham, Ala
Southwest Journal of Medicine and Surgery M $1 El Reno, Okla.
Southwestern Medicine. M $2 El Paso, Texas
Surgery, Gynecology and Obstetrics with International Abstract of Surgery M $10 Surgical Publishing Co, 30 N Michigan Ave, Chicago
Svenska Läkaresällskapets Handlingar Q 7 50 kronor Stockholm
Texas State Journal of Medicine M $1 50 Western National Bank Bldg, Fort Worth, Tex
Therapeutische Monatshefte M 12 marks. Berlin
Ugeskrift for Læger W 20 kronen Copenhagen
United States Naval Medical Bulletin Q $1 Washington, D C
Upsala Läkareförenings Förhandlingar Irregular 10 kronen
Vermont Medicine. M $1 Rutland, Vt
Washington Medical Annals Bi m $1 2114 18th St., N W, Washington, D C
West Virginia Medical Journal M $1 50 Huntington, W Va
Wiener klinische Wochenschrift. W 24 marks Vienna
Wisconsin Medical Journal M $2 Goldsmith Bldg, Milwaukee.
Zeitschrift für Tuberkulose. Irregular 22 40 marks Berlin

W—Weekly, M—Monthly, Semi m—Semi monthly, Bi m—Bi monthly, Q—Quarterly *Cannot be loaned

SUBJECT INDEX

This is an index to all the reading matter in The Journal. In the Current Medical Literature Department only the articles which have been abstracted are indexed.

The letters used to explain in which department the matter indexed appears are as follows: "E," Editorial, "C," Correspondence, "T," Therapeutics, "Ml" Medicolegal, "P," Propaganda for Reform, "ME," Medical Economics, "ab" abstract, the star (*) indicates an Original Article in The Journal.

This is a subject index and one should, therefore, look for the subject word with the following exceptions: "Book Notices," "Deaths" and "Society Proceedings" are indexed under these titles at the end of the letters "B," "D" and "S." Matter pertaining to the Association is indexed under "American Medical Association."

The name of the author follows the subject entry in brackets. The figures in parentheses refer to the paragraph in the Current Medical Literature Department, the number following, to the page in The Journal.

For author index see page 2046

A

ABDERHALDEN REACTION See also under names of various diseases
ABDERHALDEN REACTION in mental diseases [Cotton White & Stevenson] (71) 807
ABDOMEN drainage position in [Hill] 145—ab
galvanopalpation of [Kahane] (108) 409
hemorrhage of ovarian origin report of case [Novak] *1160
incisions closing skin in [White] (131) 848
large among soldiers 475 [Denechau & Mattrais] (34) 1348
pain acute significance and mismanagement of [Sheddan] (119) 150
pain in children significance of [Trawick] (72) 226
Ptosis of See Splanchnoptosis
surgery at advanced operating center [Hughes & Rees] (33) 1667
surgery in war [Wallace] (32) 1667
surgery under local anesthesia [Farr] (73) 1874
symptoms with cardiovascular disease [Scheel] (111) 1530
tumor of anterior wall foreign body in [Henry] (18) 65
wounds 300 emergency operations for [Walters Rollinson Jordan & Banks] (16) 809
wounds gunshot in pregnancy [Smead] (7) 146
wounds gunshot 300 [Fraser & Drummond] (2) 1214
wounds gunshot treatment of [Lockwood Kennedy Macfie & Charles] (1) 1214
wounds operative treatment in later stage [Pribram] (86) 944
ABDOMINOCARDIAC reflex [Prevel] (61) 1070
ABORTION criminal admissible evidence of 396—Ml
early uterine simulation of corpus luteum and retention cysts of ovary with extra uterine pregnancy and [Rubin] (112) 1437
procuring unlawful involves assault 1867—Ml
revocation of license for conviction of offense involving moral turpitude 485—Ml
ABSCESS appendix with hemorrhage and death [Tate] (1) 146
from subcutaneous injections of quinin [Moreau] (53) 1511
in preperitoneal cavity [Onano] (63) 1788
parapharyngeal [Reynolds] *1475
pelvic nature's drainage of [Packard] (22) 1942
pneumococcus of brain in boy of 6 [Condat] (42) 1148
prostatic surgical treatment [Eisenstadt] *838
pulmonary acute artificial pneumothorax in [Tewksbury] *770 (115) 1146
spinal cord [Hitchcock] *1318
thyroid 3 cases [Lahey] (50) 400
ABSINTH dispensaries closing of 1422
ACACIA intravenous injections of colloidal solutions of in hemorrhage [Hurwitz] *699
ACARUS and skin eruption, [Lawrence] (18) 739
ACCIDENT industrial mortality in 1916 increase in 1[illegible]4—ab
policies severance of hand not within terms of 1[illegible]4—Ml
trade in 1918 605—ab
traffic 204—E
ACCOMMODATION See Eye Accommodation
ACETONE bodies in urine determination of [illegible] (63) 1072
in urine of acutely insane [Mills & Wearne] (115) 1[illegible]0
ACETONEMIA in child fatal case of periodic vomiting with [Busacchi] 571—ab
ACHILLES tendon rupture of, 138
ACHONDROPLASIA dwarfism from [Magnus] (13[illegible]) 147
hereditary deforming [Ehrenfried] *502
ACID Acetylsalicylic See also Aspirin
acetylsalicylic 159 201—E 1261
amino acid nitrogen of blood in normal and complicated pregnancy and in new born infant [Morse] (27) 1542
amino and vitamins and other chemical factors in growth of meningococcus [Lloyd] (21) 1147
amino present significance of in physiology and pathology [Van Slyke] (28) 395
and alkalies in diabetes 1411—E
base equilibrium of body relation of to carbohydrate metabolism [Underhill] *497
boric dry hypochlorite plus boric acid for first dressing for wounds [Vincent] (44) 1005
boric in cream 860
boric in septic infections [Ochsner] 220—ab (60) 1145
Carbolic See Phenol
citric 1206
colloids and kidney secretions 1044—E
comparison of action of oxalic tartaric and citric acids 984—E
hydrochloric and betain hydrochlorin 931
hydrochloric in stomach estimation of 931
hydrochlorous acid solution electrically produced from hypertonic saline as disinfectant for septic wounds [Beattie Lewis & Gee] (16) 1006
Intoxication See Acidosis
nucleic acid injections changes in blood picture after [Neymann] (35) 1289
oxalic nephritis produced by 1820—E
picric acid jaundice and true icterus 923
picric test for in blood in factitious jaundice [Tixier & Bernard] (51) 220
Salicylic See also Salicylates
salicylic for mature flies and hellebore for larvae 292—E
salicylic natural and synthetic comparative study of toxic effects [Bartholow & McNeill] (12) 1660
uric calculus unique roentgenographic demonstration of [Stevens] *1903
uric effect of ingestion of coffee tea and caffein on excretion of in man [Mendel & Wardell] *1805
uric elimination of in disease of glands with internal secretion [Nowaczynski] (62) 493
ACID uric in gout and other forms of arthritis [Pratt & McClure] 1[illegible]1—ab
uric quantitative test for in urine [Angiolani] (48) 1441
ACIDOSIS [Austin] (56) 1005 [Palmer] (58) 1005
as factor in toxemias of pregnancy [Losee & Van Slyke] (32) 659
blood transfusion from an alkalinized donor in [Gettler & Lindeman] *[illegible]
carbon dioxid acidosis cause of heart dyspnea [Peters] (15) 1588
due to anesthesia prophylaxis of [Morriss] *1391
estimation of under clinical conditions 1327—E
in acute and chronic disease [Frothingham] (1) 64
in children with reference to pathologic anatomy [Lackner & Faust] (1) 536
inanition and ketonuria in children 786—E
influence of on hyperglycemia in diabetes mellitus [Epstein & Felson] (14) 310
influence of on surgical procedures [Lincoln] (34) 735
nephritis and blood phosphates, 1526—E
study of blood urea plasma chlorids and acidosis in uranium nephritis in dog and protective action of sodium bicarbonate [Goto] (73) 1582
with severe diarrhea [Schloss & Stetson] (2) 936
ACNE Roentgen ray treatment of 14 years experience [Le Fevre] (142) 662
rosacea etiology and pathogenesis of [Arullani] (84) 1588
treatment of [McDonnell] (44) 875
ACTINIC light rays in dermatology value of 1341
ACTINOMYCOSIS report of cases [Ramstad] (77) 67
ADAMS STOKES DISEASE See Heart Block
ADDISON'S DISEASE pathogenesis of [Yushtchenko] (70) 1879
sugar in blood and dietetic treatment in [Grote] (90) 408
ADENITIS tuberculous cervical occurrence of scars from in clinical tuberculosis [Wang] *1063
ADENOCARCINOMA of breast occurring in boy of 13 [Simmond] *1899
ADENOIDS gritting teeth as sign of [Benjamins] (89) 1515
vegetation in infants and causes [Marfan] (30) 2010
ADENOMA peri urethral with stricture of urethra [Surraco] (46) 1293
polypous in gastro intestinal tract [Ingebrigtsen] (125) 234
ADHESIONS of pelvic colon [Case] (83) 1436
peritoneal extent and duration of [Hertzler] 145—ab
ADIPOCERE composition of [Ruttan & Marshall] (59) 1064
1413—E
ADIPOSIS dolorosa [Alsona] (101) 495
ADRENALIN See Epinephrin
ADRENALS See Suprarenals
ADSORPTIVE agents intestinal action of [Petersen] *1234
ADVERTISEMENTS placing of through economic pressure 379—E
ADVERTISER validity of proceedings and law against 558—Ml
ADVERTISING clean in newspapers 729—E
deceptive validity and application of law against 215—Ml
in New Orleans influences which keep it on decent basis 1414—E
nostrum and agency leverage [illegible]—E
nostrum in medical journals 637—E
patent medicine (gambling on human fear) 850—E
patent medicine in newspapers 1561—E
AGAR luetin reaction in syphilis produced by [Stokes] *1052
AGED blood pressure in [Bowes] (83) 485
AGGLUTINATION of more than one infectious germ [Baerthlein] (86) 155
Test See Typhoid Widal Reaction
AGGLUTININ disappearance of from blood of anaphylactic and normal animals [Hempl] (47) 875
AGGLUTINOMETER clinical apparatus for making rapid estimations of agglutinin titer of blood [Garrow] (17) 941
AGRICULTURAL college for girls [Satre] (37) 1877
AGRICULTURE employment of children in 1270
AIR albuminoid bodies in tests for [Weichardt & Wiener] (55) 584
alveolar carbon dioxid content of blood and in obstructed expiration [Friedman & Jackson] (27) 1780
alveolar percentage of carbon dioxid in and capacity of air passages during rest and exercise [Pearce] (17) 1288
alveolar percentage of carbon dioxid in in pneumonia patients who are cyanotic [Pearce & Hoover] 1869—ab
differential atmospheric pressure and intratracheal insufflation of air for thorax operations [Giertz] (92) 816
ALABAMA medical news 120 205 293 919 1192 1639 1923
state board January report 1207
ALASKA'S new medical practice act 1935
ALBANY plan for educating physicians in military surgery and hygiene 1129
ALBUMIN globulin ratio in experimental intoxications and infections [Hurwitz & Whipple] (36) 578
parenteral injection of [Weichardt] (62) 813
ALBUMINOID bodies in air tests for [Weichardt & Wiener] (35) 584
ALBUMINOUS food remnants in stools 931
ALBUMINURIA 34—T
causation and curability of certain long standing [Riesman] 1871—ab
functioning of kidney with high blood pressure in elderly without [Wikner] (140) 948
in insurance 120—T
quantitative determination of albumin in urine [Andresen] (98) 1952
ALBUMOSURIA 33—T
ALCOHOL American Medical Association resolution on 1768

ALCOHOL and precision work, [Tötterman] (133) 410
as cause of crime, 608—ab
as disinfectant and insecticide [Arkhipiants] (88) 1515
attitude of physicians toward, 1483—E
campaign against, 859
effect of, on marksmanship 1422
effect of on respiration and gaseous *metabolism* in man, [Higgins] (64) 1944
import prohibition on 46
in urine in intoxicated [Widmark] (90) 1298
injection in hemangioma, [Stromeyer] (38) 71
military measures against, 923, *1414 1487*
restriction of production of drinks containing, 560
ALCOHOLISM 995
cure for, *[Emerson] 899—ab*
effect of liquor control on 1770
loss from, [Emerson] 1280—ab
ALIENISTS and neurologists to meet 1195
ALIMENTARY TRACT See Gastro-intestinal Tract
ALKALI administration, influence of on blood sugar content in relation to acid base producing properties of diet [McDanell & Underhill] (50) 1064
and acids in diabetes, 1411—E
ALKALINE treatment of early gallbladder carriers, [Nichols] *958
ALLERGY See Anaphylaxis, Immunity
ALLIGATOR pear in antidiabetic diet [Escomel] (85) 1151
ALTITUDE and aviator, 1986—E
ALUM and phosphate content in baking powders, 1206
cheap for water purification, 293—E
ALVARENGA and jubilee prizes awarded in Sweden 130
ALZHEIMER'S DISEASE clinical and anatomic features in [Lambert] (114) 150
AMBARD'S coefficient of urea excretion, clinical value of, [Lewis] (26) 399
constant, clinical importance in urinary surgery, [Nakagawa] (2) 1067
AMBRINE, 1057
and paraffin films, [Leech] 1497—P
AMBULANCES and military hospitals donated by French villages *for Russian front, 1053*
calls in New York notes on, 1300 [Christopher] 217—ME
companies organization of, 1920
gifts of 1053
AMEBA histolytica carriers, 6 cases treated with emetin bismuthous iodid [Imrie & Roche] (34) 491
AMEBIASIS See Dysentery Amebic
AMERICAN Academy of Medicine, meeting of 1641
Academy of Ophthalmology and Oto-Laryngology meeting of 1926
Academy of Public Health 296
ambulance men, praise for 383
ambulances at French front 792
Association of Anesthetists meeting of 1641
•Association of Immunologists, meeting of, 989, 1195
Association of Medical Milk Commissions, meeting of 1641
Association of Pathologists and Bacteriologists, meeting of, 989, 1333
Association of Pediatrists, meeting of, 1641
College of Mechano Therapy, 932
College of Physicians, meeting of 1641
Congress on Internal Medicine 45
Dermatologists' Association, meeting of, 1641
field service, activity of, 1769
Gastro Enterological Association, meeting of, 1273
Gynecological Society, meeting of, 1641, 1926
Health Society, 1202—P
Journal of Syphilis 382
Laryngological, Rhinological and Otological Society, meeting of 1830, 1927
Laryngological Society new officers, 1927
Life Convention meeting of 859
AMERICAN MEDICAL ASSOCIATION, action which should be taken by state and county societies for supplying medical officers, 1183—E
AMERICAN MEDICAL ASSOCIATION, address of chairman of House of Delegates, 1712
address of President of Association, 1835
appointment of committee to report on resources of Association and their utilization in cause of war 1711
appointments to membership of state Red Cross committees 1711
auditor's report, 1717
care of infants and children during war, 1767
clinics at New York session, 1198, 1378 1423, 1493, 1569
commercial exhibit at New York, 1375
committee on Conservation of Vision, 1757
committee on cooperation with National Education Association 1757
committee on credentials, preliminary report of 1711
committee on Women s and Children's Welfare 1755
cooperative medical advertising bureau 1714
death of Dr Jones, 1716
election of officers 1835
health of our soldiers, [Billings] 1835
House of Delegates 1354, 1711, 1831
increased cost of paper, 1714
insignia for medical students not in active service 1767
medical features of New York City 1355
New York hotels, 560 1361
New York session 388 992, 1137, 1329—E, 1822—E
New York *Session* number, 1265—E
news 560 862 992 1137, 1198, 1423, 1493 1569 1711 1831
official call to the officers fellows and members of, 1354
patriotic meeting 1423 1840
percentage of physicians receiving The *Journal*, 1716
President elect, A D Bevan, 1823—E
Propaganda department educational work of 1049—E
publication of section papers, 1714
purchases Liberty Bonds 1830
reference committees 1712
registration 1363 1839
report of Board of Trustees, 1713 1716
report of committee on credentials 1831
report of committee on Red Cross medical work 1764
report of committee on social insurance, 1721
report of Council on Health and Public Instruction 1719
report of Council on Medical Education 1758
report of Council on Scientific Assembly 1762
report of Judicial Council, 1718 1836
report of Reference Committee on Amendments to Constitution and By-Laws 1832 1838
report of Reference Committee on Hygiene and Public Health 1834 1837
report of Reference Committee on Legislation and Political Action 1831 1837
report of Reference Committee on Medical Education 1834
report of Reference Committee on Miscellaneous Business 1836
report of Reference Committee on Reports of Officers 1831 1838
report of secretary 1713 1768
report of subcommittees on Health and Public Instruction 1721
resolution on alcohol 1768
scientific assembly 1842
scientific assembly, preliminary program of 1365
scientific exhibit 1364
scientific exhibit, advisory committee on 862
scientific exhibit awards in, 1861
scientific exhibit, time for making application for scientific exhibit extended 1128—E
scientific program at New York 1328—E
section on Dermatology 1855
section on Diseases of Children 1851
section on Gastro Enterology and Proctology 1860
AMERICAN MEDICAL ASSOCIATION, section on Genito Urinary Diseases, 1857
section on Laryngology, Otology and Rhinology 1849
section on Nervous and Mental Diseases 1854
section on Obstetrics Gynecology and Abdominal Surgery, 1848
section on Orthopedic Surgery 1858
section on Pathology and Physiology, 1853
section on Pharmacology and Therapeutics 1852
section on Practice of Medicine 1860
section on Preventive Medicine and Public Health, 1856
section on Stomatology 1853
section on Surgery, General and Abdominal 1845
speaker s bureau 1719
suggestion to component societies relating to medical preparedness, 1711
transportation to meeting 1137, 1198, 1359, 1360
treasurer's report 1717
tribute to Alexander Lambert 1836
war registration and New York session 1558
AMERICAN Medical Golfing Association [Hubbard & Walter] 1423
Medical Milk Commissioners meeting of, 1926
Museum of Safety, medals awarded by 1334
Otological Society meeting of 1926
Pediatric Society, meeting of, 1195 1710
Physicians' Convention 1420
Physicians' expedition must return to their bases 990
Radium Society meeting of 1641
Red Cross See Red Cross, American
Review of Tuberculosis, 1052
surgeons abroad 558
Surgical Association new officers, 1927
University 932
AMINO-ACID See Acid Amino
AMMONIA of gastric juice [Huber] (5) 804 855—E
AMPUTATIONS of thigh in articular wounds of knee abuse of, 724
of thigh technic for in war wounds [Mosti] (66) 1670
stumps surgery of, [Huggins] (34) 1667
ANAEROBES plate cultures of easily improvised and effective method of obtaining [Wilson] (20) 1947
ANALGESIA See Anesthesia
ANAPHYLATOXIN and anaphylaxis [Novy & DeKruif] *1524
ANAPHYLAXIS See also Immunity
ANAPHYLAXIS absorption of foreign protein by anaphylactic tissues and hepatic reaction in [Manwaring] 1659—ab
alimentary remedy for in man of 29 [Pagniez & Radot] (18) 70
anaphylactic action of cereal grain on respiratory tract [Turnbull] (23) 223
anaphylatoxin theory of, [Weil] (72) 312
and anaphylatoxin [Novy & DeKruif] *1524
and immune reactions analysis of by means of isolated guinea-pig lungs [Manwaring & Kus*sama*] *(49) 875*
disappearance of agglutinin from blood of anaphylactic and normal animals [Hempl] (47) 875
eosinophilia and nervous system, [Klinkert] (95) 1152
simultaneous injections of antigen and antiserum [Weil] (72) 312
to serum 1631—E
ANEMIA aplastic in two boys of six and three [Gorter] (31) 228
mild of schoolchildren true significance of eosinophilia in [Scaroni] (93) 945
pernicious bile content *of blood* in [Blankenhorn] (23) 1063
pernicious chemistry of [Squier] (59) 1782
pernicious differential diagnosis of amenable to cure by splenectomy and hematopoietic hemolytic index [Schneider] (47) 806
pernicious *febrile* [Jessen & Unverricht] (58) 883
ANEMIA pernicious relation of to infection, [Newburgh] (79) *940*
pernicious salvarsan in, [Lampe] (46) 316
pernicious splenectomy for [Smith] (9) 65 [Giffin] *429
pernicious, surgical management, [Percy] (103) 1508
secondary, of doubtful causation [Martin] (64) 1581
secondary, intragluteal injections of nondefibrinated blood in, *[Köhler] (74) 493*
simple blood destruction in plethoric animals and animals with [Rous & Robertson] (70, 71) 1582
splenic surgical treatment *of* Banti's disease report of 3 cases, [Lockwood], 146—ab
ANESTHESIA acidosis prophylaxis *of, [Morriss]* *1391
and kidney function, 549—T
anesthetic shield, new, [Herb] *708
apparatus *for laboratory use* [McGrath] *1547
chloroform, death resulting from administered by pharmacist in emergency 724
E C method of anesthetizing soldiers [McCardle] (18) 1584
ether blood pressure during [Muns] (31) 148
ethyl chlorid prolonged general given in repeated small doses 992
gas and oxygen delivery under of 2 patients with lost cardiac compensation, [Getman] *547
local, [Petridis] (55) 1149
local abdominal surgery under [Farr] (73) 1874
local *for* children, [La Chapelle] (122) 587
local *for* operations on neck [Jorge] (105) 496
local for prostatectomy, [Legueu] (39) 1293
nerve blocking between 2 tourniquets [Sievers] (76) 1010
nerve blocking for operations on *limbs [Jentzer] (53) 942*
nerve blocking in field [Schmid] (89) 232
nitrous oxid oxygen, long [McCurdy] *547, [Coburn] 798—C
paravertebral, technic for, in neck region, [Santoni] (60) 1149
sacral to relieve pruritus, [Holland] (123) 234
spinal *170 cases operated under,* [Weston] (5) 150
spinal routine report of 6 229 cases [Boyd & Yount] *601
under influence of expulsion of blood from region of tourniquet, [Petroff] (123) 946
ANESTHETIST, legal status *of* nurse as [Goldwater] 730—ab
ANEURYSM abdominal, operative treatment of [Wheeler] (12) 1438
aortic *ruptured* series of [Woolley] (22) 1661
aortic treated by wiring [Hare] 1871—ab
femoral double cure by proximal occlusions with autoplastic fascial flap [Jones & *Walts*] 221—ab
innominate with rupture with tuberculosis of adjacent tissues [Bine] *113
intrathoracic *[Fenton]* (9) 830
temporal artery traumatic [Horsley] 221—ab
thoracic wired 4 years *ago two* cases *[Lusk] (35) 148*
traumatic pathology and treatment [Johannessen] (126) 231
unusual cases of, [Woolley] (57) 1782
ANGINA pectoris differentiation of spurious from true anginal pains by *two tests,* [Pitfield] 390—C
Vincent s See *Vincent s Angina*
ANGIOMA of uterus [Boks] (103) 1671
ANHALONIUM sale of to be regulated 382
ANILIN dyes factors *which govern* penetration *of* arsenic and into brain [McIntosh & Fildes] (6) 1146
poisoning *[Platz] *692*
ANIMALS in research Lister on [Keen] 53—C
wild in India *deaths due* to 1196

ANKLE crippling callus production in classification and treatment of [Tanton] (61) 406
wounds of foot and in war [Quenu] (38) 1847
ANKYLOSTOMIASIS See Uncinariasis
ANTHELMINTICS, oil of chenopodium and chloroform as [Hall & Foster] *1961
ANTHRAX early workers on 1341
in shaving brushes 132
industrial control of 1 02—E
outbreak among tannery workers [Brown & Simpson] *608
serotherapy of [Penna Cuenca & Kraus] (88) 1589
ANTIBODY criticism of word by a literary man 553—E
cutaneous [Smith & Cook] 1660—ab
ANTICEPHALALGINE, 565—P
ANTIFORMIN sputum cup [Fine] *1177
ANTIGENS cholesterinized Hecht complement fixation reaction in syphilis with reference to [Kolmer] (65) 312
ANTIMONY hemolyzing power of certain preparations of used in therapeutics [Caronia] (3) 495
in malaria intravenous injections of [Low & Newham] (15) 1667
influence of on fever curve in internal leishmaniasis [Marinucci] (106) 87
intravenous injections of tartrate of in granuloma [da Matta] (118) 410
ANTIPNEUMOCOCCUS serums production of [Wadsworth & Kirkbride] (68) 1582
ANTISEPTICS See also Disinfectants
ANTISEPTICS alternating use of 48
comparison of in regard to diffusibility action on leukocytes and action on ferment activity [McGee] (5) 850
ideal search for 40—E
influence of on activities of leukocytes and healing of wounds [Bond] (5) 314 (1) 879
specificity in [Taylor] (30) 100
ANTITETANUS Serum See Tetanus
ANTITOXIN Diphtheria See Diphtheria Antitoxin
Tetanus See Tetanus Antitoxin
ANUS fistula of [Göz] (67) 1587
AORTA aneurysms ruptured series of [Woolley] (22) 1661
aneurysms treated by wiring [Hare] 1871—ab
syphilitic disease [Korczynski] (98) 233 (111) 409
syphilis localized on [Klotz] 1941—ab
APOMORPHIN absorption of morphin and through conjunctiva [Macht] *1230
APONEUROSES primary tumors of [Bolognesi] (63) 406
APOPLEXY See Brain Hemorrhage
APPARATUS See also Instrument
APPARATUS anesthetic for laboratory use [McGrath] *1547
anesthetic shield [Herb] *708
Dodds Parker suspension appliance for fractures [Davison] *909
fluoroscope to aid in removal of metal bodies [Bettman] *908
fluoroscope vertical home made [Shively & Tyler] *1901
for control of hemorrhage following suprapubic prostatectomy [Hamer] *1694
for making rapid estimations of agglutinin titer of blood [Garrow] (17) 941
for treatment of myopia [Bacchi] (36) 811
for writing with knee [Blachly] *1696
head rest [Sharpe] *707
improved aspirating [Sheaff] *710
improved atomizer for applying iodin [Golch] (51) 666
improvised shaking machine [Le Compte] *710
in birth fracture of femur [Russell & Reynolds] *1902
not entitled to artificial arm as 1938—Ml
orthopedic improvised [Hoasly] (20) 70
polarization for determination of color sense [Göthlin] (141) 948
spinal curvature brace [Orr] *1253
APPARATUS spiral spring to drain fistula [Sarason] (3) 812
APPENDECTOMY via inguinal canal [Sa] (105) 1213
APPENDICITIS acute analysis of 852 operations [Morf] *302
acute torsion of pedicle of ovarian cysts complicating [Loop] (106) 805
and invagination of movable cecum [Cignozzi] (58) 1 13
chronic hematemesis due to with explanation of pathologic physiology [Outland & Clendening] (14) 434
chronic value of genupectoral position for Bastedo's sign in [Davis] (117) 1005
experimental [J W McMeans] (25) 1780
following acute pharyngitis [Bennett] (5) 1551
inflammation in persistent patent Meckel's diverticulum simulating [Oliver] (25) 1668
left sided [Crook] 1286—ab
neglected [Crook] (115) 1665
APPENDIX abscess with hemorrhage and death [Tate] (1) 146
abscess with general peritonitis by streptococcus viridans, [Marker] (41) 1853
carcinoid tumors of, [Tuxen] (102) 1750
patulous significance of [Squires] (41) 1144
removal of for cure of trifacial neuralgia and other nerve pain about head and face [Rosenthal] (14) 140
ARCH Brand Blood Remedy 1932—P
Brand Nerve Tonic 1932—P
ARCHIVES Médicales Belges new journal 923
ARGYROL and Wright's solution in gonorrhea [Dragoo] (102) 1 0
ARISTOCHIN tabellae dulces 461
ARIZONA medical news 1653 1753
state board April report 1649
state board January report 1058
state board July report 482
state board October report 936
ARKANSAS homeopathic May examination 1774
medical news 41 126 205 1132 1331 1489 1953
state board November report 800
ARMS See also Extremities
ARMS actively movable artificial [v Baeyer] (84) 944
artificial not entitled to as apparatus 1938—Ml
factitious affections of legs or imposing as sequels of war wounds [Mori] (85) 1588
ARMSTRONG'S Croup Ointment 565—P
ARMY See also Soldiers
ARMY and Navy Medical Corps will compulsory service be necessary? 1129
British physicians in fatalities among 1917 1927
field service regulations 1551
German health of 473
Medical Corps See also Medical Reserve Corps
Medical Corps as a career [Noble] *955
Medical Corps candidates for 723
Medical Corps English casualties in 1710
Medical Corps examinations 723
Medical Corps honor for director general of 792
Medical Corps Lord Northcliffe on 1331
Medical Corps of U S Army achievements of 1324—E
Medical Corps Officers increasing rank of 1917
Medical Corps preference for young physicians in 1127—E
medical officer of 1180 1259 1322 1407 1478 1551 1624
medical officers for duty of officers of county and state societies in securing 1127—E 1183—E
medical officers of application forms for appointment as 1182—E
medical officers rank of 1916—E
medical service new status of 1768
need of additional medical officers for 1044—E
registration and the draft 1486
regulations and equipment 1322
surgeon duties of physician in war time 1048—E
ARMY Swiss skin and venereal diseases in [Merz] (63) 1041
ARRHYTHMIA digitalis in [Boruttau & Stadelmann] (34) 881
ARSENIC and quinin in malaria, 1137
cancer case of, [Bland Sutton] (2) 150
drug fastness of spirochetes to arsenic mercury and iodid compounds in vitro [Akatsu & Noguchi] (38) 538
factors which govern penetration of anilin dyes and into brain [McIntosh & Fildes] (6) 116
in blood diseases [v Jagic] (37) 660
in chemicals and in foods [illegible]2
in lead projectiles toxic action of [Lewin] (76) [illegible]
Marsh's test for 653
preparations in syphilis [Martin] (110) 1065
resistance of spirochetes to action of hexamethylenetetramin derivatives mercury compounds and [Akatsu] (39) 938
trioxid of perforation of nasal septum due to inhalation of [Davis] *1620
ARSENOBENZOL death due to 474
in tabes and general paralysis dangers from [Lépine] (35) 2010
preventive treatment of inherited syphilis with salvarsan and arsenobenzol courses for pregnant women [Cano] (4) 1040
ARSENPHENOLAMINE hydrochloride 1407
ARTERIOSCLEROSIS electrotherapy in heart disease and [Weber] (38) 811
production in rabbit by intravenous injections of diphtheria toxin [Bailey] (44) 224
retinitis of and relation to renal retinitis and cerebral vascular disease [Moore] (33) 740
ARTERY carotid hemiplegia caused by embolism following gunshot wounds of 4 cases of [Colledge & Dunn] (24) 582
femoral treatment of mal perforans by resecting nerve fiber sheath of [Veyrassat & Schlesinger] (46) 1217
ligation of necessity for keeping venous blood in limb to prevent gangrene after [Schirt] (39) 668
pulmonary sclerosis of [Barlaro] (32) 1151
temporal traumatic aneurysm of [Horsley] [illegible]1—ab
wounds without immediate hemorrhage 298
ARTHRITIS See also Gout Joint Diseases Rheumatism
ARTHRITIS chronic multiple due to bacillus mucosus [Dick] *622
Connellan King diplococcus infection of throat and [King] *91
deformans as infectious disease [Nathan] (53) 1943
deformans treatment of 54
elimination of uric acid in gout in other forms of [Pratt & McClure] 1871—ab
experimental effect of heat and continuous incandescent electric light in [Simmonds & Moore] (33) 309
experimental effect of salicylates on [Fantus Simmonds & Moore] (9) 1505
experimental in rabbits [Faber] (77) 73
rheumatoid metabolism and dietetic treatment of [Pemberton] (5) 1660
spirochaetosis arthritica [Reiter] (23) 605
ARTHROPATHY tabetic spinal (Charcot's spine) treated by intradural injections of mercurialized serum [Billington] (15) 1661
ASCARIS longevity of adult ascarids outside body of host [Hall] *772
lumbricoides intestinal obstruction due to [Perret & Simon] *244
oil of chenopodium and chloroform as anthelmintics [Hall & Foster] *1961
ASCITIS diversion of ascitic fluid into subcutaneous tissue causing large local accumulation of fluid [Henschen] (58) 943
ASCITIS milky [Udaondo & Castex] (88) 1151
ASPHYXIA gas treatment of 1130
traumatic [Sherrill] 309—ab *1237
ASPIRATING apparatus, improved [Sheaff] *710
ASPIRIN See also Acid, Acetyl Salicylic
ASPIRIN 213—P
I & E 1261
ASSOCIATION of American Medical Colleges elects officers, 616
of American Teachers of Diseases of Children meeting of 1830
of Medical School Inspectors in Netherlands 555
of Railway Chief Surgeons, meeting of 1493
ASTHMA bronchial complement fixation and precipitin reactions with serum of patients with who are sensitive to proteins of wheat horse dandruff, cat hair and bacteria [Walker] (57) 1943
bronchial part staphylococcus pyogenes aureus and albus may play in cause of [Walker & Adkinson] (60) 1943
bronchial sensitization of patients with to bacterial proteins [Walker] (59) 661
bronchial sensitization of patients with to proteins in animal, fruit and vegetable foods [Walker] (55) 1943
bronchial sensitization of patients with to various pollens [Walker] (56) 1943
bronchial studies of diphtheroid organism isolated from sputum of patients with [Walker & Adkinson] (82) 661
bronchial treatment for, [Auld] (10) 1784
horse treatment with normal horse serum [Zeger] *843
remedy Sterline's 1932—P
spasmodic anaphylactic nature and treatment [Babcock] *438
tuberculous 2 cases [Frenguelli] (33) 1011
ASTRAGALECTOMY in poliomyelitis [MacAusland] *239
ATAXIA Locomotor See Tabes Dorsalis
ATHLETE effects of breakfast no breakfast and of caffein on and on nonathlete [Hyde & others] (2) 2006
ATHLETICS and health [Forsythe] 995—C
ATROPIN stimulating phase of [Petzetakis] (69) 153
AURICULAR Fibrillation See Heart
AUSCULTATION improved technic for percussion and [Tornai] (68) 813
AUSTIN'S water test meal for examining secretory function of stomach [Brendle] (84) 408
AUTOINTOXICATION Intestinal See Intestine
AUTOMOBILE ambulances poisoning by exhaust gases in 559
supply scheme swindle 1430
AUTOPSY See Necropsy
AUTOSEROTHERAPY plus venesection [Spiethoff] (44) 316 (82) 408
AVIATOR and altitude 1986—E
aural complications in during flights 647
military medical examination of 475
military visual requirements of [Small] *841 [Blaauw and Small] 1205—C
AVOCADO new sugar from d mannoketoheptose [La Forge] (80) 401
AXILLA cancer of breast misplaced in [Horsley] 309—ab
AXTELL Mrs. member of medical commission [Axtell] 730—C

B

BABY week in 1917 46
BACILLUS aerogenes capsulatus infection and intoxication [Bull & Pritchett] *1815
aerogenes capsulatus and gas gangrene [Simonds] (45) 1943
Boas Oppler 377—E
bulgaricus in coccus infections of bladder [O'Neill] (40) 1662
Carriers See Carriers and under names of diseases
coli pyelonephritis due to [Crabtree & Cabot] *589

BACILLUS enteritidis Gaertner agglutinating tests in, [O Farrell] (31) 151
mucosus, chronic multiple arthritis due to, [Dick] *622
tetani, bacillus resembling [Adamson & Cutler] (19) 1785
Tuberculosis See Tuberculosis
typhi-exanthematici, isolation of, from body louse, [Olitsky, Denzer & Husk] 575—ab
Typhoid See Typhoid Bacillus
BACKACHE as seen by neurologist, [Bochroch] 1001—ab
as viewed by internist, [Sailer] 1000—ab
from orthopedic standpoint, [Davis] 1000—ab
gynecologic aspects of [Macfarlane] 1000—ab
BACKWARDNESS, See Feeblemindedness
BACTERIA, acid fast complement fixation studies on group of [Cooke] 1504—ab
reducing action by, [Aranowitz] 1578—ab
BACTERIEMIAS in agonal period [Fredette] (85) 401
BACTERIOLOGY, methods for collection and transport of body fluids for bacteriologic investigation, [Caulfeild] *1812
BACTERIOTHERAPY See Vaccine Therapy
BACTERIURIA typhic, 1999
BAKER, LEWIS, prescription fakes, 1863—P
BAKING powders, alum and phosphate content of, 1206
BALNEOTHERAPY in disturbances from hypertrophied prostate, [Fernandez] (77) 318
BANANA, nutritional value of, [Myers & Rose] *1022
BANDAGES, paraffin-covered, [Sollmann] *1178
BANG S micro-method for determination of sugar in blood, [Ege] (88) 1222
BANTI S DISEASE See Anemia, Splenic
[illegible]ÁNA goes to Upsala 1927
[illegible]UM sulphate for roentgen-ray [illegible]ork 121
[illegible]phate in gelatin for roentgen work, [Bensuade & Terry] (35) 1511
sulphate, Merck for roentgen-ray diagnosis, 121
sulphate, P W R for roentgen-ray diagnosis 121
BASEDOW S DISEASE See Goiter Exophthalmic
BASTEDO S sign, value of genupectoral position for, [Davis] (117) 1005
BATH continuous, in mental disease, [Strecker] *1796
BEAN white, dietary component of, 1627—E
BEARD, ringworm of, [Muijs] (114) 496
VON BEHRING and Ehrlich 1045—E
BELGIAN children, Philadelphia physicians' fund for feeding, 1053
[illegible]ession, aid to 790
BELGIUM general health conditions in [Lucas] *27
relief work in, 1053
[illegible]NCE-JONES proteinuria, studies in [Taylor, Miller & Sweet] (49) 1435
[illegible]ZENE See Benzol
[illegible]ZIDIN method of Wagner for rapid examination of occult blood, [Vaughan] (91) 1145
BEN[illegible]ZIN for isolation of typhoid bacilli, [Uedrigalloff] (95) 1789
BEN[illegible]OL in leukemia in boy, [Winslow & Edwards] (90) 1066
BER[illegible]LL S reaction, study of [[illegible]audnitz] (67) 813
BERIBERI, case reports, [Reed] *116
or beriberic syndrome, [Fraga] (51) 1042
[illegible] of mother to some dietary factors in milk, 782—E
BERLIN letter 384, 473, 647, 791, [illegible] 924
BERTHELOT statue of 1642
[illegible]ERTRAND S modification of Fehl[illegible] 1281
[illegible] hydrochlorin and hydro[illegible] 931
[illegible]THOL benzoate, 1911
[illegible]CLEOPROTEINS antigen [illegible] of [Wells] (49) 65
[illegible] *[illegible]
[illegible] [Hill] *911
BILE circulation and life of red blood corpuscles 1819—E
duct, accidental surgical injuries to, [Werelius] *1545
duct autogenous fascial reconstruction of, [Ginsburg & Speese] (30) 487
duct common, excessive drainage complicating surgery on, [Sadlier] (17) 398
duct common overlooked calculi in, [Eisendrath] *968
duct diseases speculations on genesis of 1912—E
duct disturbance of law of contrary innervation as pathogenetic factor in diseases of gallbladder and, [Meltzer] (6) 1579
enrichment of urine with, for bacteriologic examination, [Trawinski] (101) 586
in blood in pernicious anemia, [Blankenhorn] (23) 1063
pigment metabolism [Whipple & Hooper] (18-20) 486
pigment metabolism and Eck fistula, [Whipple & Hooper] (6) 1001
pigments in urine, [de Jager] (90) 815
tract experimental research on bile peritonitis without perforation of [Blad] (119) 234
tract infection, what can internist do for, [Jenkins] (58) 939
typhoid bacilli in from duodenum, [Labbé & Canat] (43) 741
BILIRUBIN in plasma and other body fluids [Blankenhorn & Hoover] 1871—ab
BILIRUBINURIA, 33—T
BINIODOL 650—P
BIOLOGIC products dating of, 728—P, [Park] 1428—C
products, licenses of German manufacturers revoked 1333
products standardization of, 1416
therapy in war, [McCoy] *1401 1413—E
BIRTHS and deaths in Ontario 1915 45
decrease in, and war, 647
in Prussia in 1914 724
rate movement to raise 1198
BISMUTH and iodoform paraffin paste, bacteriologic and chemical action of [Chambers & Goldsmith] (21) 1068
and iodoform-paraffin paste in septic wounds, [Anderson & Chambers] (20) 1068
paste, toxic symptoms after use of [Frelich] *111 [Hepworth] (13) 1510
BITES deaths due to of wild animals in India, 1196
from insects and reptiles on Mexican border, [Coughlan] *1549
of poisonous spiders, [Garcia & Houssay] (74) 1951
BLACK'S Pulmonic Syrup, 213—P
BLACKWATER FEVER, intravenous administration of concentrated solutions of soluble quinin in malaria and, [McLean] (96) 1290
BLADDER calculi in wounds of bladder, 132
cancer [Gardner] 1779—ab
cancer of prostate and, radium in [Young] *1174 [Barringer] *1227
cancer transplantation of ureter following traumatism and resection of bladder for cancer, [Judd] 308—ab (132) 1875
changes due to lesions of central nervous system, [Burns] (138) 1875
coccus infections of bacillus bulgaricus in, [O Neil] (40) 1662
contracted cystoscopic diagnosis of, [Krotoszyner] *687
exstrophy treatment of [Rovsing] (89) 74
hernia of case of strangulated right femoral intraperitoneal cystocele with enterocele [Saliba] *1237
idiopathic dilatation of or other urinary organs, [Bard] (33) 582
in diseases of central nervous system [Caulk & Greditzer] (16) 734
in gunshot and other injuries of spinal cord, [Walker] (9) 890
incontinence and enuresis nocturna in soldiers, causes and treatment, [Fuchs & Gross] (91) 586
method of supporting in cystocele, [Smith] (19) 1506
BLADDER nongonorrheal infections of posterior urethra and rôle of seminal vesicles in, [Geraghty] *757
obstructions at orifice, [Lowsley] *444
primary suture and union of operation wounds of, [Thompson] (24) 2009
rupture, intraperitoneal, causes of death with, [Curschmann] (66) 943
tuberculosis iodin fumes in, [Baradulin] (90) 1671
tuberculosis of kidney and clinically cured without operation, report of 50 cases, [Dillingham] (23) 1002
tumors, benign, surgical treatment of [Beer] (134) 1875
tumors, cultivation outside of body [Burrows, Burns & Suzuki] (56) 877
tumors of urinary, surgical therapy of benign and malignant tumors [Beer] *680
BLASTOMYCOSIS of tongue [New] *186, [Weiss] 391—C
systemic, with stomach as possible port of entry, [Sihler, Peppard & Cox] (24) 1345
BLIND, book station for, in Leipzig 861
books for 924
reeducation of, [Terrien] (42) 229
soldiers workshop for, 1197
statistics of 1195
system of writing for, [Cantonnet] (20) 1510
writing that can be read by seeing and blind, [Cantonnet] (32) 1885
BLINDNESS, color improved methods for examining for [Boström, Göthlin & Ohrvall] (95) 746
intranasal operation for, [Pfister] (128) 1066
BLIZZARDS device to aid respiration in, 1256—ab
BLOCH S portrait, presentation of, 558
BLOOD alkalinity of, in malignant tumor and other pathologic conditions and relation of alkalinity of blood to barometric pressure [Menten] (53) 1781
amino-acid nitrogen of, in normal and complicated pregnancy and in new born infant, [Morse] (27) 1942
bile content of, in pernicious anemia ([Blankenhorn] (23) 1063
calcium and magnesium in in rickets and tetany [Howland & Marriott] 1939—ab
calcium content of 1915—E
calcium in in tuberculosis [Halverson, Mohler & Bergeim] *1309
carbon dioxid content of alveolar air and in obstructed expiration [Friedman & Jackson] (27) 1780
carbon dioxid tension in arterial and venous blood determination of difference in [Sonne] (117) 1012
cholesterol and cholesterol esters in [Bloor & Knudson] (51) 808
cholesterol content of blood during menstruation variations in, [Goñalons] (104) 1011
cholesterol in of mother and fetus, [Slemons & Curtis] (3) 1287
cholesterol in under pathologic conditions [Denis] (59) 806
circulation of in vessels, [Wybauw] (35) 1585
coagulating power of examination of preliminary to operations [Weil] (50) 1787
coagulating time of, blood platelet extract by mouth does not affect [Klinger] (64) 743
coagulation time of estimation by air bubble on spirit level principle, [Lenoble] (38) 583
coagulation time of factors affecting, [Grabfield] (20) 146
coagulation time of in pneumonia [Minot & Lee] *545, [Anders] 729—C
composition and urine secretion effect of calcium, water, and other substances given intravenously on [Davis] (62) 877
corpuscles red experimental studies on origin of vascular endothelium and [Reagan] (3) 298
BLOOD corpuscles red, influence of secretin on number of in circulating blood, [Downs & Eddy] (6) 2006
corpuscles, red, laking of, at temperatures over 118 F [Takaki & Miyazaki] (75) 1442
corpuscles red, life of and 'bile circulation' 1819—E
corpuscles, red, normal fate of findings in healthy animals [Rous & Robertson] (70 71) 1582
corpuscles, red occurrence of nuclear changes in following splenectomy [Gilbert] (32) 33[illegible]
corpuscles, red origin of 1629—E
corpuscles, Vibert s solution for staining, 391
Corpuscles White See Leukocyte
count after war wounds [Covaerts] (60) 1586
count, differential in pulmonary tuberculosis, [Turban] (67) 72
creatinin and creatin in plasma and whole blood of mother and fetus [Plass] (33) 1289
creatinin determination in, factors involving accuracy of [Gettler] (56) 806
dehydration of organs and in diabetic coma [Chauffard Le Conte & Dorie] (61) 1586
derived pigments, [Schneider] (34) 399
disappearance of agglutinin from of anaphylactic and normal animals [Hempl] (47) 875
diseases and spleen, [Ferrannini] (46) 2011
diseases arsenic in [v Jagic] (37) 666
distribution, some effects of epinephrin on, 200—E, [Hoskins & Gunning] (16 17) 1780
effects of epinephrin on distribution of [Gunning & Hoskins] (3 4) 2006
epinephrin content of, in conditions of low blood pressure and shock, [Bedford] (12) 1779
flow in feet effect of bandaging legs on [Stewart] (22) 1063
hemoglobin content of, in heart 917—E
in cancer under roentgenotherapy [Stevens] (30) 1580
increased diastatic activity of in diabetes and nephritis [Myers & Killian] (44) 1064
intragluteal injection of in secondary anemia, [Köhler] (74) 493
obtaining blood for diagnosis in infants, report on longitudinal sinus transfusion, [Tarr] (56) 1114
occult improved technic for detection of [Boas] (49) 741
occult rapid examination of by Wagner benzidin method [Vaughan] (91) 1145
phosphates, acidosis, and nephritis 1326—E
picric acid in, in factitious jaundice, [Tixier & Bernard] (51) 229
picture, changes in after nucleic acid injections, [Neymann] (31) 1289
picture changes in as guide in prognosis [Cardenal] (111) [illegible]
picture changes in, under influence of induced pneumothorax [Gutstein] (89) 494
platelet, arrest of severe gastric hemorrhage by drinking extract of, [v Meyer] (43) 666
platelet extract by mouth does not affect coagulating time of blood [Klinger] (64) 743
platelet extract for hematemesis [Bautigam] (81) 232
platelets significance of, [Lee & Minot] (42) 1211
pressure, action of strychnin on 305
pressure and graphic vasomotor changes in periphery during ether anesthesia [Muns] (31) 143
pressure and pulse in soldiers after battle [Briscons & Mercier] (6) 69
pressure and tobacco smoking [Thompson & Sheldon] (97) 803
pressure, arterial, variations in heart rhythm and with change of position effort and fatigue and aptitude for military service [Laubry & Lidy] (27) 1215
pressure changes induced by hot and cold applications on and within abdomen [Hammett Tice & Larson] *621

BLOOD pressure determination auscultatory [Cook & Taussig] *10 8
pressure determination phenomena auscultatory priority in [Faught] 1280—C
pressure during operations [Moots] (10) 146
pressure Harvey Laboratory for research in [Letter] 13[illegible]—C
pressure high functioning of kidney with in elderly with nt albuminuria [Wikner] (140) 948
pressure high in nephritis in children 73 cases [Berkley & Lee] (1) 120[illegible]
pressure high pulse pressure significance of [Warfield] *8[illegible]1
pressure high significance of [Strickler] (107) 160[illegible]
pressure high what becomes of cases [Baird] (126) 4 0
pressure in aged [Bowes] (83) 45[illegible]
pressure low epinephrin content of blood in conditions of shock and [Bedford] (12) 17[illegible]
pressures low not associated with trauma or hemorrhage [Simonds] (8) 64
pressure low relation of to fatal termination in traumatic shock [Fike & Coombs] *18[illegible]
pressure mental and physical activity with reference to nutrition and [Heiner] (54) 1213
pressure of Filipinos 18 —E
pressure parallel study of urine edema and in pregnancy [Rosenschn] (49) 65[illegible]
pressure registration in man prolonged serial automatic method of [Fantus] *1207
production spleen as regulator of [Stradomsky] (52) 88[illegible]
proteins studies on [Hurwitz & Whipple] (36) 578
return of urea from kidney to [Addis & Sherky] (1) 2006
salicylate in of individuals receiving full therapeutic doses of drug [Scott Thoburn & Hanzlik] (45) 549
serum dosage of urea in [Landolph] (70) 318
serum importance of concentration and temperature for biologic behavior of [Sachs] (18) 604
serum prothrombin and thrombin in [Gasser] (3) 804
serum rabbit specific and non specific action of in complement fixation test [Huddleson] (48) 875
staining method for rapid [Martini] (77) 745
subcutaneous administration of fresh human [Holm] (79) 67
sugar distribution of as regards corpuscles plasma and whole blood in health and disease [Gradwohl & Blaivas] (88) 1145
sugar in [Rydgaard] (96) 320
sugar in and dietetic treatment in Addison's disease [Grote] (90) 408
sugar in determination by Bang's micro method [Ege] (88) 1[illegible]22
sugar in juvenile myxedema [Nilsson] (96) 746
sugar in urine and modified micro method for determining [Momose] (77) 1442
sugar influence of acid forming and base forming diets on [McDanell & Underhill] (51) 1064
sugar influence of alkali administration on in relation to acid base producing properties of diet [McDanell & Underhill] (50) 1064
sugar obstetric significance of and placental interchange [Morriss] (34) 1289
supply and longitudinal growth of bone [Haas] (1) 1001 (3) 1505
supply of ovaries variations in and possible operative importance [Sampson] (124) 878
to expel blood from limbs [Ritter] (45) 316
transfusion [Miets] 480—C [Hotz] (58) 1669
transfusion and splenectomy in pernicious anemia [Giffin] *429
transfusion by citrate method [Sydenstricker Mason & Rivers] *1677
transfusion direct [Fullerton Dreyer & Bazett] (16) 1947
BLOOD transfusion from alkalinized donor in acidosis therapy with report of case [Cottier & Lindeman] *[illegible]
transfusion history methods dangers preliminary tests present status [McClure & Dunn] (31) 538
transfusion modern methods of [Lewisohn] *820
transfusion of rinsed corpuscles and defibrinated blood after hemorrhage [Hedon] (17) 1440
transfusion simplified method of determining isoagglutination group in selection of donors for [Moss] *150[illegible]
urea causes of variation in concentration of [Addis & Watanabe] (6) 1[illegible]05
urea study of acidosis plasma chlorids and in uranium nephritis in dogs and protective action of sodium bicarbonate [Goto] (73) 1[illegible]82
vessels gunshot wounds of cases from Mesopotamia [Wynne Richardson & Dodson] ( ) [illegible]
vessels occlusion of effect on man 18[illegible]1—E
vessels of heart valves [Bayne Jones] (5) 1779
vessels projectile injuries of [Pearson] (7) 1[illegible]0
water and glucose concentration of relation between [Hiller & Mosenthal] (64) [illegible]
BLUE SPOT eruption peculiar in soldiers [Lawrence] (21) 1[illegible]
BOARDS Health See Health Boards of
BODY natural imperfections of and limitations of choice 714—E
BONE absorption and reconstruction cells active in 1016—E
and joint diseases 6 cases [Eikenbary] (15) 658
benign cysts and giant cell sarcoma of [Kimpton] (4) 1505
echinococcic disease [Walker & Cummins] *83[illegible]
filling iodoform wax of Mosetig Moorhof indications for [Ashhurst] (44) 735
fragility and association with blue sclerotics and otosclerosis [Bronson] (1) 1510 [Van der Hoeve & de Kleijn] (87) 1[illegible]
giant cells in bone lesions significance of [Barrie] (37) 335
grafting [Imbert] (41) 1440
grafting without opening joint for pseudoarthrosis of neck of femur [Delbet] (41) 1668
heliotherapy in diseases of joint and [Campbell] (20) 3[illegible]
hemangioma cavernosum of [Hitzrot] (17) 14[illegible]3
longitudinal growth of relation of blood supply to [Haas] (1) 1001 (3) 150[illegible]
malignant disease of roentgen diagnosis of [Pfahler] (7) 1143
myxochondroma of long [McIntyre] (11) 227
Paget's disease of primary sarcoma complicating [Heazlet] 1779—ab
shattered long encircling with wire [Sénéchal] (68) 1071
syphilitic lesions simulating tuberculosis [Fisher] *360
transplants autogenous intramedullary new method of applying and of making autogenous bone screws [Hoglund] (90) 580
transplants free growth of [Todyo] (143) 1875
transplants of cartilage and comparison of permanence of [Davis] (39) 335
tuberculosis [Griffith] (18) 1147
tuberculosis phototherapy of [Schmidt] (89) 1222
BOOKS medical standard size for [Pollard] 304—C
BORCHERDT'S Malt Extract with Cascara Sagrada 1911
Malt Extract with Cod Liver Oil 1911
Malt Extract with Creosote 1911
BOWEL See Intestine
BRACE new spinal curvature [Orr] *1253
BRAIN See also Cerebellum Dura Mater Pineal Gland Pituitary Body, Skull
BRAIN abscesses pneumococcus in boy of 6 [Condat] (42) 1148
chief vasoconstrictor center in new evidence in favor of [Ranson] (16) 146
BRAIN factors which govern penetration of arsenic and anilin dyes into [McIntosh & Fildes] (6) 1146
hemorrhage multiple spontaneous [Fr enacre] (62) 7[illegible]0
hemorrhage treatment of 481
hemorrhages punctiform of in gas poisoning [Mott] (8) 1[illegible]10
physiology of anterior and posterior central convolution of [Minkowski] (80) 13[illegible]
sarcoma of fourth ventricle of, [Salt] (24) 803
stratigraphic analysis of finer cortex changes in in dementia praecox [Southard & Canavan] (4) 0[illegible]
syphilis subdural injections of alvarsanized mercurialized serum in [Nicholson] 1057—ab
tuberculoma of spinal cord and report of case [Ashf (2) 18[illegible]2
tumor chronic nephritis simulating [Collins] *1314
tumor infundibular tumor in child causing diabetes insipidus with tolerance of alcohol [Newmark] (11) 150[illegible]
tumor interpeduncular tumor symptom complex associated with [Collinet] (4) 1 0[illegible]
tumor of cerebellopontile angle importance of aural symptoms in early diagnosis of [Eagleton] [illegible]
wound gunshot decompression craniotomy in [McHenry] *[illegible]44
wound of spinal cord and recent genotherapy of disturbances after from [Bonnus Chartier & Rose] (40) 158[illegible]
BRAZIL nut edema of mouth tongue and epiglottis due to eating [Dabney] *1476
BREAD new in France 8[illegible]9
new standard for loaf 1054
ration for army 14[illegible]2
regulations in England 647
substitutes home made for diabetes [Williamson] (10) 314 [Nicholson] (16) 581
BREAST adenocarcinoma of occurring in boy of 14 [Simmons] 1[illegible]
cancer [Oliver] (20) 487
cancer in a man 1[illegible]38—ab
cancer misplaced in axilla [Horsley] [illegible]0[illegible]—ab
cancer prognostic and therapeutic significance of skeletal metastases in [Levin] (40) 1144
cancer radical cautery operation in [Percy] 146—ab
cancer ultimate outcome of operative cases [Siirala] (68) [illegible]012
colostrum in of nonpregnant [Cardlund] (86) 12[illegible]1
cyclic changes in under normal and pathologic conditions [Loeb & Hesselberg] (40 41) 578
intracanalicular papilloma of [Judd] 146—ab (3[illegible]) 938
Nipple See Nipple
Nursing See Infant Feeding
second primary growths in remaining after amputation of other for cancer [Drew] (4) 227
supernumerary nipples and in childbearing women in Finland [Schroderus & Wichmann] (101) 886
tuberculosis bilateral case [illegible] [Gilberti] (7[illegible]) 73
tumors benign and malignan[illegible] sults of operations for [Pf[illegible] (40) 1662
wounds treatment of 132
BRILL'S DISEASE See Typhus Fever
BRILLIANT green and flavine in infected wounds [Browning Gulbransen Kennaway & Thornton] (11) 581 [Ligat] (12) [illegible]81
BRINKLER food expert acquitted 378—E 388—P
food expert seeks abrogation of fraud order 1566
BRITISH Army Navy Soldiers etc See under Army Navy etc
BROM I PHOS 2001—P
BROMODERMA or bromo iododerma case of [Lane] *1695
BROMO IODODERMA or bromoderma case of [Lane] *1695
BRONCHIECTASIS clinical and pathologic features of [Stengel] 1869—ab
surgery of [Robinson] (83) 580
BRONCHITIS spirochete [Galli-Valerio (70) 1150
BRONCHOPNEUMONIA croup simulating membranous croup due to [Ordonez] (89) 745
BRONCHOSCOPY mechanical problems of foreign body extraction [Jackson] *[illegible]45
possibilities and limitations of, [Ridpath] *2[illegible]1
BRONCHUS endothelioma of right removed by peroral bronchoscopy [Jackson] (10) 930
experimental research on suture of and drainage of pleura [Nielsen] (124) [illegible]88
foreign body (bone fragments) in, 2 cases [Burns] *1[illegible]5
BROOKLYN no separate health department for 1566
BROWN'S Acacian Balsam 18[illegible]3—P
Blood Treatment 14[illegible]7—P
[illegible] Injection 14[illegible]9—P
BRUCE COLONEL not upheld 131
BUDAPEST letter 5[illegible]1
BULLET Localization of See under Foreign Body
Wound See Wound Gunshot
BUNDLE OF HIS extreme prolongation of conduction time in example resulting from digitalis therapy [Barker & Bridgman] *[illegible]03
BURNS paraffin for devices for melting paraffin for [Sollmann] *18[illegible]
paraffin in treatment of wounds and observations on various preparations [Belter] *1801
paraffin treatment [illegible]3—T [Hull] (5) [illegible]81 [Sollmann] *10[illegible] [Leech] *14[illegible]7
paraffin treatment of and of other open wounds developments in [Sollmann] *17[illegible]9
presumption of negligence from burning of patient 1775—Ml
roentgen ray liability for 1[illegible]35—Ml
BURSA subacromial calcium deposits in [Natrig] (138) 947
BUSILA'S serodiagnosis of syphilis, 866
BUTTOCKS wounds in war, [Davis] *1689

BOOK NOTICES

Adenoids and Tonsils 1650
Abatston S A Mother's Guide in Care of Her Children 731
Anatomical Names Especially the Basle Nomina Anatomica 17[illegible]
Automobile and Gasoline Engine Encyclopedia Dyke's 56
Automobile How to Run an 1650
Back Injuries and Their Significance Under the Workmen's Compensation and Other Acts 605
Bacteriology General Pathological and Intestinal 394
Bailey F R Text Book of Histology 1574
Barjon F Radiodiagnostic des Affections Pleuropulmonaires 1060
Barker L F Clinical Diagnosis of Internal Diseases 868
Barr W I K Therapy in Pulmonary Tuberculosis 56
Batten F E Acute Poliomyelitis Its Nature and Treatment 800
Billings F Focal Infection 216
Blood Pressure from the Clinical Standpoint 731
Breathing Organism and Environment as Illustrated by Physiolo y of [illegible]
[illegible] Growth of Medicine
[illegible] of Patients Undergoing Gynecologic and Abdominal Procedures Before During and After Operation 1930
Character Formation Mechanism 854
Chatterji K K Handbook of Surgical Operations 1651
Chemical Physiology Essentials 1775
Chemistry Organic Laboratory Manual of 1208
Childhood Diseases of Infancy and 1208
Children Diseases of 1282
Coolidge A Adenoids and Tonsils 1650
Cragin E B Obstetrics Practical Text Book for Students and Practitioners 869
Dana C L Poetry and the Doctors 1867
Diabetes Mellitus Treatment of 483
Diabetes New Method in 383
Diet Adequate 1650
Dyke A L Dyke's Automobile and Gasoline Engine Encyclopedia 56
Dyke's Automobile and Gasoline Engine and [illegible]

Eycleshymer, A C, Anatomical Names, Especially the Basle Nomina Anatomica 1775
Faught, F A., Blood-Pressure from the Clinical Standpoint, 731
Feeding the Family 731
Focal Infection 216
Fractures Modern Methods of Treating 570
Fuchs, H E Text-Book of Ophthalmology 1867
Gardner, M. S, Public Health Nursing 1650
Graham E E, Diseases of Children, 1282
Groves, E W H., Modern Methods of Treating Fractures, 570
Gunshot Wounds How They Are Inflicted, Their Complications and Treatment 869
Haldane J S, Organism and Environment as Illustrated by the Physiology of Breathing 1867
Halliburton, W D, Essentials of Chemical Physiology for Use of Students, 1775
Hamilton A. M Recollection of an Alienist, 1283
Hanson W C Diseases of Occupation and Vocational Hygiene, 570
Hart T S, Diagnosis and Treatment of Abnormalities of Myocardial Function, 1936
Health and Disease Their Determining Factors 997
Healy, W, Mental Conflicts and Misconduct 1651
Heart Disturbances of, 570
Heckel F La Névrose d'Angoisse et les États d'Émotivité Anxieuse Clinique Pathogénie, Traitement, 1936
Histology, Text-Book of 1574
Holt, L E, Diseases of Infancy and Childhood 1208
Howe L, Universal Military Education and Service 1651
Hurst A. F Medical Diseases of War 1866
K Therapy in Pulmonary Tuberculosis 56
icy Diseases of Childhood and 208
t Feeding, A Handbook of 655
rnal Diseases, Clinical Diagnosis of 868
Joslin E P, Treatment of Diabetes Mellitus 483
Kellogg, J H New Method in Diabetes, 393
Kendall A. I Bacteriology General Pathological and Intestinal 393
Keniston J M, Kingdom of the Mind 1651
Kimball James P, Late Colonel and Assistant Surgeon General, U S Army, 1574
Kimball M B, Soldier Doctor of Our Army, James P Kimball 1574
Kingdom of the Mind 1651
Kober, G M Diseases of Occupation and Vocational Hygiene 570
Krause F Text Book of Surgical Operations, 1936
Laboratory and Clinical Technic, 1936
La Garde, L A., Gunshot Wounds How They Are Inflicted Their Complications and Treatment 869
Lee, R I Health and Disease Their Determining Factors 997
McLean, P S Sanitation in War, 1866
McKendric A. Back Injuries and Their Significance under the Workmen s Compensation and Other Acts 655
ell H. L Clinical and Laboratory Technic 1936
m, W P Water Supply (Considered Principally from a Sanitary Standpoint) 869
cal Record Visiting List 217
cine Growth of, from Earliest Times to about 1800, 1650
Mental Conflicts and Misconduct, 1651
Mentally Deficient Child 800
Military Education and Service, Universal, 1651
Montgomery E E Care of Patients Undergoing Gynecologic and Abdominal Procedures Before, During and After Operations, 1936
Mother's Guide and the Care of Her Children 731
Myocardial Function, Abnormalities of, 1936
ephritis Pathology of, as Illustrated by 32 Consecutive Cases 800
Nervous Diseases Manual of 1650
Névrose d'Angoisse et les États d Émotivité Anxieuse Clinique Pathogénie Traitement 1936
Nonne, M., Syphilis and the Nervous System, 56
Nursing Surgical and Gynecological 655
Obstetrics, Practical Text-Book for Students and Practitioners 869
Occupation Diseases of, and Vocational Hygiene 570
Ophthalmology American Encyclopedia and Dictionary of, 217
Ophthalmology, Text Book of 1867
Ophüls, W, Pathology of Nephritis as Illustrated by 32 Consecutive Cases, 800
Osborne, O T, Disturbances of Heart 570
Ourselves A Personal and Family History Register for Preserving Records of a Private and Personal Nature for One Married Couple and Their Children 1866
Page, V W How to Run an Automobile *1650
Parker E M Surgical and Gynecological Nursing 655
Pharmacology, Laboratory Guide in, 1431
Pharmacology, Manual of, and Its Applications to Therapeutics and Toxicology, 1431
Physical Examination and Diagnostic Anatomy 997
Physician's Visiting List for 1917 217
Poetry and the Doctors 1867
Poliomyelitis Acute Its Nature and Treatment 800
Prescriptions Incompatibilities in 1775
Prevention of Disease 997
Preventive Medicine and Hygiene 1059
Public Health Nursing 1650
Radiodiagnostic des Affections Pleuropulmonaires 1060
Recollection of an Alienist Personal and Professional 1283
Rose M S Feeding the Family 731
Rosenau M. J, Preventive Medicine and Hygiene 1059
Royster L T Handbook of Infant Feeding 655
Ruddiman E A, Incompatibilities in Prescriptions 1775
Sanitation in War 1866
Sencert L Les Blessures des Vaisseaux 1650
Sex Hygiene Education of Young in A Text-Book for Parents and Teachers 1574
Skin Treatise on Diseases of 731
Slade C B Physical Examination and Diagnostic Anatomy 997
Sollmann, T, A Laboratory Guide in Pharmacology 1431
Sollmann T Manual of Pharmacology and Its Applications to Therapeutics and Toxicology 1431
Spear I J Manual of Nervous Diseases 1650
Steel M, Laboratory Manual of Organic Chemistry for Medical Students 1208
Stiles P G Adequate Diet 1650
Surgical Clinics of Chicago 868
Surgical Operations, Handbook Designed for Use of Students of Surgery 1651
Surgical Operations Text Book of Illustrated by Clinical Observations 1936
Stelwagon H W Treatise on Diseases of Skin, 731
Syphilis 997
Syphilis and the Nervous System 56
Taylor J M. Ourselves A Personal and Family History Register 1866
Thompson, L Syphilis 997
Tonsils and Adenoids 1650
Tuberculosis Pulmonary, I K. Therapy in 56
United States Army Manual of Medical Department 370
Uranalyses Practical, 1936
Vaisseaux Blessures des 1650
War Medical Diseases of, 1866
Water Supply (Considered Principally from a Sanitary Standpoint) 869
White W A Mechanisms of Character Formation 654
Williams B G R Practical Uranalyses 1936
Willson R N Education of Young in Sex Hygiene 1574
Winslow K., Prevention of Disease, 997
Wood C A American Encyclopedia and Dictionary of Ophthalmology 217
Workmen s Compensation and Other Acts Back Injuries and Their Significance Under 655

C

CAFFEIN, effects of coffee tea and on excretion of uric acid in man [Mendel & Wardell] *1805
  effects of breakfast, no breakfast and of, on athlete and non-athlete, [Hyde & others] (2) 2006
  effects of on heat production, [Means & others] (26) 1872
  influence of on toxicity of morphin sulphate, 180—ab
CALAMINE liniment, [Pusey] (66) 148
CALCIUM and magnesium content of normal urine, [Nelson & Burns] (68) 66
  and magnesium in blood in rickets and tetany, [Howland & Marriott] 1939—ab
  cacodylate, 1911
  deposits in subacromial bursa, [Natvig] (138) 947
  hypochlorite in prophylaxis of infection in war wounds, [Vincent] (59) 1586
  in blood 1915—E
  in blood in tuberculosis [Halverson Mohler & Bergeim] *1309
  in cerebrospinal fluid in tabes dorsalis [Halverson & Bergeim] (61) 1064
  in urine quantitative test for, [Mayer] (66) 1071
  intraspinal injection of insoluble mercury salts and [Carniol] (37) 1216
  metabolism in hemophilia, [Laws & Cowie] (4) 936
  output of magnesium and in man, 467—E
  urinary and fecal output of in normal men, [Nelson & Williams] (67) 66
  water and other substances given intravenously, effect of, on blood composition and urine secretion, [Davis] (62) 877
CALCULUS See also under Organs
CALCULUS uric acid unique roentgenographic demonstration of [Stevens] *1903
CALIFORNIA medical news 41, 205 293 379 469 555 719 919, 1192 1417 1639 1707 1923
  state board January report 1342
  state board October report 569
CALLUS production in ankle classification and treatment of [Tanton] (61) 406
CALORIMETRY clinical [Aub & others] (25-31) 1872
CAMP sanitation lectures on, 723
CAMPHOR for trench foot [Raymond & Parisot] (24) 1511
  gum *preserves substances and* solutions that spoil easily [Romanelli] (85) 1011
CANADIAN army medical corps, 790
  doctors on army duty 790
  medical news 45 131 208 296 382 471 557 646 722 789 858 922 988 1052 1135 1195 1273 1333 1419 1491 1566, 1641 1709 1830 1926
CANCER See also Tumor and under organs and regions
CANCER and diabetes relations between [Robin] (42) 1585
  arsenic case of [Bland Sutton] (2) 150
  basal celled of skin [Hazen] (118) 1005
  blood in under *roentgenotherapy* [Stevens] (30) 1580
  Commission Harvard, report of 981—ab
  experimental production of 1818—E
  heredity and 418—ab
  immunity effect of on resistance to tuberculosis [Taylor & Murphy] (66) 1582
  immunity significance of lymphocyte in [Sittenfield] (51) 1781
  intestine roentgen findings in 28 cases of [Bensaude & Guenaux] (34) 1008
  mortality 1817—ab
  mortality in England 1197
  mortality in Netherlands [Deelman] (89) 815
  of liver in one-year babe [Frølich] (137) 947
  of various organs at different ages [Harbitz & Platou] (108) 1074
  prevention and control of medical profession and [Johnson and others] 1285—ab
  primary, of peritoneum [Quarella] (44) 1512
CANCER prophylaxis of in Porto Rico, 1566
  radium therapy in [Ewing] *1238 [Forssell] (85) 1443
  roentgenotherapy of, [Steiger] (55) 220, [Holding] (25) 1288
  sarcoma and, in uterus, simultaneous occurrence of [Outerbridge] (4) 1287
  Skin See also Epithelioma
  trauma in etiology of, [v Kuester] (55) 882
  Wassermann reaction with, [Sonntag] (59) 742
CARBOHYDRATE, influence of and milk feeding on character of intestinal flora [Hull & Rettger] (68) 488
  metabolism and suprarenal system [Mackenzie] (14) 1505
  metabolism relation of acid base equilibrium of body to [Underhill] *497
  metabolism, studies in [McDanell & Underhill] (50 56) 1064
  starvation in infants [Bloch] (93) 1444
CARBON dioxid acidosis cause of heart dyspnea, [Peters] (19) 1288
  dioxid content of blood and alveolar air in obstructed expiration [Friedman & Jackson] (27) 1780
  dioxid effect of on respiratory and cardiovascular centers [Hooker Wilson & Connett] (21) 1780
  dioxid in alveolar air in pneumonia patients significance of percentage, [Pearce & Hoover] 1869—ab
  dioxid percentage of in alveolar air and capacity of air passages during rest and exercise [Pearce] (17) 1288
  dioxid tension in arterial and venous blood determination of [Sonne] (117) 1012
  monoxid poisoning oxygen in [Nicloux] (30) 1511
  monoxid poisonings in buildings situated on an old dump [Albaugh] *1033
CARCINOMA See Cancer
CARDIOLYSIS [Summers] 145—ab
CARDIORENAL DISEASE See under Heart and Kidney
CARDIOVASCULAR DISEASE abdominal symptoms with [Scheel] (111) 1590
  and fibromyoma uteri [McClellan] (4) 398
  and renal disease prognosis in [Dock] (63) 1340
  hypertensive, *management of early* stages of [Thayer] (120) 1783
  role of food in etiology of [Eustis] (150) 738
  value of spinal puncture in etiologic diagnosis of [Bloch] *691
  with kidney disease [Silvestri] (67) 1220
CAROTID Artery See Artery Carotid
CAROTID GLAND tumors of [Wetterdal] (137) 410, [Cahill & Taylor] *1898
CARPAL bones fractures of results of treatments [Marshall] (9) 1002
CARREL DAKIN Solution See Dakin Solution
CARRIERS See also under names of diseases i e Diphtheria carriers Typhoid carriers etc
CARRIERS bacilli search for and treatment of [Müller] (68) 941
  bacilli, treatment of, [Herz] (60) 72
  of sick person duty and liability of 1867—Ml
CARTILAGE free transplants of bone and comparison of permanence of [Davis] (39) 335
  grafts from calf [Imbert Lheureux & *Rouslacroix*] (67) 1010
  grafts in wounds of eye 1275
  transplants [v Tappeiner] (59) 943
CASE reports, outline for [Taylor] 1933—C
CASSIA importation of, and other spices 45
CASTA FLORA 303—P
CASTRATION effect of on osteomalacia in male [Elliott & Nadler] (10) 1660
CATALASE in muscles of large and small animals [Burge & Neill] (2) 804
  in tissues effect of *thyroid feeding* on [Burge & others] (8) 2006
CATARACT extraction aspiration technic for [Barraquer] (89) 1789

CATARRH Barker's remedy for 1863—P
  Sykes Sure Cure for 1863—P
CATGUT ligatures action of bacteria and dressing solutions on [Taylor] *1333
CATHARTICS during puerperium routine use [McPherson] (44) 1843
CATHETERIZATION of ureters [Blondini] (6) 53 [Cudin] (45) 1293 1623—T
CATS conjunctivitis from, 591
CAUTERY water cooled retractor for use in mouth with [New] *1263
CECUM mobile invagination of and appendicitis [Cignozzi] (58) 1313
CELLS connective tissue phagocytic power of [Jones & Rous] (47) 224
  growth of studies on [Burrows Burns & Suzuki] (50) 877
  protoplasm visible structure of and death changes [Chambers] (11) 1258
CEPHALOCELE anterior 3 cases [Vegas & Jorge] (86) 1151
CEREBELLUM lesions differential diagnosis between purulent labyrinthitis and [Friesner] *353
  syndrome after wound of inferior vermis [Leri] (38) 2010
CEREBROSPINAL FLUID antibody content of in meningococcal infection [Taylor] (20) 1292
  bacteriology of in poliomyelitis and scarlet fever [Gauss] *443
  calcium content of in tabes dorsalis [Halverson & Bergeim] (61) 1064
  chemical reactions of in differentiation of tuberculous meningitis [Golay] (28) 2010
  chemistry of in children [Leopold & Bernhard] (3) 309
  colloidal gold reaction of in acute poliomyelitis [Felton & Maxcy] *752
  compression syndrome case confirmatory of [Hitchcock] *1474
  ferments of [Leschke & Pincussohn] (40) 881
  from human poliomyelitis does it contain specific infective agent [Abramson] *546
  functions of [Halliburton] (1) 1146
  in 50 cases of cerebrospinal syphilis [Sutter] (142) 402
  mastic test for, [Cutting] *1810
  sugar in in acute meningitis [Laroche & Pignot] (48) 1669
  sugar in urine and test for [Martini] (102) 945
  total nitrogen cholin and cholesterin in in various pathologic conditions of nervous system [Cantieri] (59) 317
  xanthochromia and other changes in frequency in chronic surgical spinal diseases [Elsberg & Rochfort] *1802
  xanthochromia of [Sprunt & Walker] (71) 736
CEREBRUM See Brain
CESAREAN SECTION abdominal present status of [Newell] *604
  ankylosis of hips as indication for [Dillingham] 866—C
  conservatism in [Shafer] (66) 1874
  end results [Humpstone] (4) 874
  extraperitoneal [Kohlmann] (114) 490 [Chamorro] (98) 1589
  is operation indicated in delivery of breech presentation? [McPherson] (36) 659
  postmortem report of 2 cases [Pfaff] (6) 146
  scar rupture of [Bell] (4) 146 [Rongy] (5) 146
CHAGAS DISEASE 552—E
  involving serous membranes near diaphragm [Valladares] (111) 157
CHANCRES multiple of lip [Zeisler] *1546
CHARCOT'S spine intradural injections of mercurialized serum in [Billington] (15) 1661
CHARITABLE institutions rule of nonliability of 1285—MI
CHARLOTTE Medical Journal 637—E
CHARTS plotting simple method of [Williams] (80) 489
CHAULMOOGRA OIL in leprosy hypodermic use of preliminary report of series A [Bercovitz] *1960
CHAUVEAU Professor death of 475
CHEEK congenital lipoma of [Ransohoff] 308—ab
CHEMICAL industry in Russia 49
  trades industrial diseases in 658—E
CHENOPODIUM oil of and chloroform as anthelmintics [Hall & Foster] *1361
  oil of in treatment of carriers of endameba histolytica [Walker & Emrich] *1416
CHEST See Thorax
CHICAGO College of Medicine and Surgery graduates of extension of time granted by Ohio Board to [Matson] 1781
  Laryngological and Otological Society war resolutions by 1453
  medical education in 208
  unit reaches England 1103
CHICKENPOX cornea ulcer from, [Wesler] *1476
CHIGGERS [v Bacewitz] (26) 2012
CHILBLAINS treatment of 653
CHILD BEARING See Labor Obstetrics
CHILD Labor Conference National 1145
  labor on farm 1563—ab
  welfare work 217
  welfare work at Havre during war [Leir & Lecanuneux] (44) 1143
CHILDREN abdominal pain in significance of [Trawick] (42) 2020
  acetonemia in fatal case of periodic vomiting with [Busacchi] 531—ab
  acidosis in with reference to pathologic anatomy [Lackner & Gauss] (1) 525
  anomalies of schoolchildren and syphilis in [Scaroni] (83) 515
  anesthesia for local [La Chapelle] (123) 597
  chemistry of cerebrospinal fluid of [Leopold & Bernhard] (3) 309
  cholera in intravenous infusion of saline in [Tushinsky] (88) 815
  cirrhosis of liver in [Satre] (55) 1234
  code of laws for welfare of children 1000
  creatinuria in 204—E
  diabetes in [Kleinschmidt] (68) 493 [Joslin & Gray] 1869—ab
  dyspeptic diarrhea in [Blanc] (27) 315
  ear disease in welfare work for [Laubi] (41) 316
  eczema in [Comby] (5) 663
  employment of in agriculture 1270
  enuresis in 1985—T
  d'Espine sign in diagnosis of pulmonary and tracheobronchial glandular tuberculosis in [Bloom] (110) 1583
  food requirement of healthy 1698—E
  fracture of external condyle of humerus in [Stone] (20) 658
  gastro intestinal disturbances in treatment of [Coppert] (73) 744
  growth during school years 992—E
  health examination at school entrance [Burnham] *893
  heart disease in [Goodman] (28) 311
  high blood pressure in nephritis in 93 cases [Berkley & Lee] (3) 1209
  inanition ketonuria and acidosis in 786—E
  intestinal bacteria in [Ford Blackfan & Batchelor] 1776—ab
  kidney calculi in 370—T
  mortality 1421
  nervous or neuropathic child [Angell] (140) 402
  open air school child as type [Durney] (122) 68
  pneumococci in types of [Mitchell] (94) 1005
  pneumonia in cold air in 30—E
  pyelitis in [Quinby] *591
  rectal gonorrhea in [Stümpke] (75) 586
  School See also School Medical Inspection of
  spinal cord tumors in report of case of tuberculomas of cerebrum and spinal cord [Ash] (2) 1872
  surviving proportion of grows less with number of children in family [Hamburger] (68) 406
  teeth of schoolchildren 1506
  tubercle bacilli in feces of with tuberculosis of air passages [Leffler] (126) 588
  tuberculids in infants and frequency of and their relation to prognosis [Hempelmann] (16) 2007
  tuberculosis in bovine infection of [Wang] (6) 1215
  tuberculosis in detection and treatment of [Holley] (85) 494
  tuberculosis of lung focal in adults and [Opie] (47) 1943
  vulvovaginitis bacteriology of urine in 2 cases of gonococcus cystitis [Schwartz] (4) 1577
  war diet and advantage for between 2 and 6 [Pfaundler] (42) 812
CHILLS shelter [Bleaman & Boles] (11) 706
CHINA disease incidence in 377—ab [Reed] 1013—ab
  hookworm control in [Hume] *1884
  Medical Board projects of 1421
  new hospitals for 1420
  new medical era for 553
  patent and proprietary medicines in 53—E [Swan] 1057—C [Wagener] 1341—C
  society in [Reed] 1128—ab
  resolutions against use of morphin in 14
CHINESE characteristics of 455—ab
CHIROPRACTIC bill in Hawaii vetoed 1302
  colleges and New Jersey 482
  doctor factory 532
CHIROPRACTORS and Oklahoma 1301—E
  conviction of a 715—MI
  narrowing of medical practice act 735—MI
CHLORAZENE 1911
CHLORIDIMETER [Vasse Lafont Dearis & Hayem] (38) 431
CHLORIDS in urine bedside estimation of [Achard] (43) 431
CHLOROFORM and oil of chenopodium as anthelmintics [Hall & Foster] *1361
  and tricresol comparison as preservatives in antimeningitis serum [Neal & Abramson] *1035
  anesthesia death resulting from administered by pharmacist in emergency 724
  effect on of exposure to air 305
CHLOROMA report of case of [Kramer & Blenberg] *1900
CHOLECYSTECTOMY accidental surgical injuries to bile ducts [Werelius] *1544
  controlling hemorrhage in [Rhemister] *706
  in gallbladder disease [Fowler] (6) 1579
  indications for [Lund] (113) 878 [Abell] (57) 939
  operation of choice [Mathews] (106) 403
  or cholecystostomy [Deaver] (115) 878
CHOLECYSTITIS acute symptoms diagnosis and treatment of [Haus] (139) 947
  with and without gallbladder calculus [Hendon] 222—ab
CHOLECYSTOSTOMY indications for cholecystectomy and [Abell] (57) 939
  or cholecystectomy [Deaver] (115) 878
  temporary value of in gastric surgery [McArthur] (75) 67
CHOLELITHIASIS See Gallbladder Calculus
CHOLERA and typhus in Palestine 383
  in children intravenous infusion of saline in [Tushinsky] (88) 815
CHOLESTERINEMIA experimental [Anichkoff] (85) 1951
  in paratyphoid [Etienne Jolly & Mondelange] (31) 1948
CHOLESTEROL and cholesterol esters in human blood [Bloor & Knudson] (51) 806
  content of blood during menstruation variations in [Goñalons] (104) 1011
  in blood of mother and fetus, [Slemons & Curtis] (3) 1287
  in blood under pathologic conditions [Denis] (59) 806
CHONDRODYSTROPHIA See Achondroplasia
CHONDROMA of soft palate long overlooked [Gile] *1906
CHOREA Goodman's autoserum treatment of [Faber] (36) 311
  heredity in [Burr] (82) 1212
  Sydenham's organic nature of [Gareiso] (87) 1151
CHORIO—EPITHELIOMA See Deciduoma Malignum
CHOROID plexus, relation of meninges and, to poliomyelitis, [Flexner & Amoss] (61) 1435
  sarcoma of [Castresana] (115) 213
CHRISTIAN SCIENCE and prayers for profit 1701—E
  construction of exception for practice of religious tenets of churches 1208—MI
CHROMAFFIN cells Henle's reaction of in suprarenals and microscopic test for epinephrin, [Ogata & Ogata] (44) 1943
CHROMOSOMES and heredity, [Federley] (99) 846
CHVOSTEK'S SIGN 568
  pathology of facialis phenomenon in connection with tonsils [Fulay] (100) 150
CHYLURIA 33—T
CICATRIX occurrence of in clinical tuberculosis from tuberculous cervical adenitis [Wang] *1963
CITY not liable for death attributed to stagnant water 1503—MI
CIVIL Service Commission United States examination for anatomists 1927
  service examinations 1195
  service lists local to be used by federal government 1487
CLASSE'S Cough Syrup 1863—P
  Great Penetrating Liniment 1427—P
CLAVICLE fracture rational and comfortable treatment by means of crutch splint [Kelton] *1814
CLIMATE and human life 1988—E
CLOTHING waterproofing shoes and 1568
CLUBFOOT See Talipes
COCAIN and unqualified dentists 1136
  strychnin and quinin effects on vas deferens [Waddell] (83) 1212
COFFEE effect of tea caffein and on excretion of uric acid in man [Mendel & Wardell] *1805
  grounds as feed for cattle 472
COLDS Barker's Remedy for 1863—P
  head from standpoint of internist results and treatment [Reilly] (8) 1660
COLITIS chronic roentgenologic findings with [McMahon & Carman] (66) 807
  suppurating or ulcerative [Ehrmann] (53) 492
COLLECTION and transport of body fluids for bacteriologic investigation methods for [Caulfeild] *1812
COLLEGES medical and medical preparedness 1127—E
  medical nonrecognition of 1112
  medical requirements in Illinois amendments to 867
COLLINS Ague Remedy 564—P
COLLOIDS 653
  acids and kidney secretion 1044—E
COLON cancer of rectum and operative procedure in [Mayo] 222—ab
  dilatation experimental studies in [Alexander Arnett & Magoun] (119) 1437
  extraperitoneal war wounds of [Stassen & Voncken] (16) 69
  pelvic adhesions of [Case] (83) 1436
  pelvic choice of operative procedure in cancer of rectum and [Mayo] (33) 735
  should it be sacrificed or may it be reformed [Kellogg] *1957
  transverse spontaneous anastomosis between duodenum and, [Fishbaugh] *624
COLOR blindness improved methods for examining for [Boström Göthlin & Ohrvall] (85) 746
  sense polarization apparatus for determination of [Göthlin] (141) 948
COLORADO medical news 126 787 987 1132 1707
  state board April examination 1935
  state board October report 216
COLOSTOMY temporary [Shaw & Hunt] (33) 487
COLOSTRUM presence of in breast of nonpregnant [Gårdlund] (86) 1221
COLPORRHAPHY double lateral for cystocele [Carvallo] (61) 1879
COMA relative frequency of various causes of [Bissell & LeCount] *500
COMBE A death of 1422
COMPLEMENT Binding See Serodiagnosis

CONDUCTION time in bundle of His extreme prolongation of example resulting from digitalis therapy, [Barker & Bridgman] *903
CONFIDENTIAL information, disclosure of 1654—Ml
CONGRESS of Internal Medicine 924
CONJUNCTIVA absorption of apomorphin and morphin through, [Macht] *1230
CONJUNCTIVITIS from cats 991
  Parinaud's [Collins] 4—ab
CONNECTICUT homeopathic March report 1574
  homeopathic November report 305
  medical news 41, 293 1417, 1923
  state board July report 305
  state board March examination 1774
  state board November report 654
CONNELLAN-KING diplococcus throat infections sequelae with reference to arthritis [King] *91
CONSTIPATION See also Intestine Stasis
CONSTIPATION chronic habitual, [Thaysen] (128) 588
  physical and dietetic treatment of, [Borgbjaerg] (92) 1298
  relief of 304
  yellow petrolatum in, [Gifford] 304—C
CONSTRUCTION camp interstate quarantine regulations for, 1195
  camp, peculiar poisoning in [Albaugh] *1033
CONSUMPTION See Tuberculosis, Pulmonary
CONTAGIOUS DISEASES at Naval Training Station, 989
  prophylaxis of in children's hospitals, [Barbier] (37) 740
CONTRACTURE, functional paralysis and, contralateral treatment of, [Stulz] (42) 881
  Volkmann's ischemic, [Kleinberg] *1473
  Volkmann's ischemic and myositis, [Taylor] (27) 487
CONVULSIONS differential diagnosis [Flatau] (52) 882
PPERAS brown stains in skin from wet dressings of solution [Pusey] *627
  luten relative value of cer- proteins and protein con- ntrates as supplements to [Osborne & Mendel] (58) 806
CORNEA, cyst with secondary glaucoma [Hagen] (124) 234
  familial abnormally large and its relation to hydrophthalmos, [Grönholm] (100) 886
  ulcer produced by varicella, [Wyler] *1476
CORNMEAL experimental research on [Weill & Mouriquand] (40) 1948
CORPORA LUTEA (Soluble Extract) Parke Davis & Co, 1056—P
CORPUS LUTEUM functions [illegible] gical [Mulon] (32) 1148 [M [illegible] Novak] (39) 1667 [illegible] al Te[illegible] of simulation of retent[illegible] tion & ovary and, [illegible] Gunsb[illegible] pregnancy [illegible] Are[illegible] tion cysts of Complication with extra-uterine Lee R I He[illegible] and early uterine bortion [Rubin] (112) 1437
ORPUS STRIATUM, atrophy of large motor cells of in presenile type of paralysis agitans, [Hunt] 1941—ab
COTARNIN action of hydrastinin hydrastin emetin, some pyridin derivatives and on ureter, [Macht] (84) 1212
COTTON seed as food [Osborne & Mendel (58) 1064
COUGH Remedy, The-Best 651—P
COUGHS, Barker's remedy for 1863—P
  remedies misbranded, 1863—P
  Syrup Classe's 1863—P
  Syrup, Mathieu's 1863—P
  Syrup, Rawleigh's Golden 1864—P
COUNCIL of National Defense General Medical Board of Advisory Commission, 1128
  of National Defense, state committees of medical section 1635
OURT going to hospital to take testimony 998—Ml
CRANIOTOMY, decompression in bullet wound of brain and hemiplegia, [McHenry] *544
RANIUM See Skull
REAM boric acid in 860
REATIN and creatinin in whole blood and plasma of mother and fetus, [Plass] (33) 1289
  excretion of creatinin and parenterally introduced [Lyman & Trimby] (50) 806
CREATIN, excretion of what conditions determine? 784—E
CREATININ and creatin in whole blood and plasma of mother and fetus [Plass] (33) 1289
  determinations factors involving accuracy of in human blood, [Gettler] (56) 806
  excretion of creatin and, parenterally introduced, [Lyman & Trimby] (50) 806
CREATINURIA in children, 204—E
CREMASTER reflex reflex eliciting zone for [Rodella] (39) 811
CRIME alcohol chief cause of, 608—ab
CRIPPLED Soldiers See Soldiers
CRIPPLES care of, as problem for each state [Ryerson] *1881
  tristate hospital for 1641
CROUP Ointment, Armstrong's, 565—P
  simulative membranous croup due to bronchial-pneumonic process, [Ordonez] (89) 745
CROXONE misbranded, 565—P
CRUZ Oswaldo death of, 646
CRYPTORCHIDISM operative treatment of, [Keyes & MacKenzie] *349
CUBAN women organize Red Cross, 1273
CUTLER'S Vegetable Pulmonary Balsam 651—P
CYANOCUPROL 1057
CYANOSIS congenital familial new method of diagnosis of congenital heart lesions [Hess & Pearce] (1) 309
CYST, benign, of bone, and giant cell sarcoma, [Kimpton] (4) 1505
  Echinococcus See Echinococcosis
  entamebic study of, [Knowles & Cole] (30) 1666
  tooth germ, of jaw, [Wohl] (34) 148
CYSTINURIA 33—T
CYSTITIS, 1985—T
CYSTOCELE double lateral colporrhaphy for, [Carvallo] (61) 1879
  method of supporting bladder in, [Smith] (19) 1506
  strangulated right femoral intraperitoneal cystocele with enterocele [Saliba] *1237
CYSTORECTOCELE results and technic of vaginal subtotal hysterectomy for prolapse of uterus and associated with fibroid growths of fibrosis uteri [Vineberg] (138) 402
  technic of vaginal plastic operations for [Frank] (137) 402
CZERNY hygienic testament of, 791
  time allotted to reading by, 931

D

DAKIN and Carrel method in acute ganic Chemistry for Medical St[illegible]
  mastoiditis [Mahu] (54) 1669
  and Carrel method in war wounds [Lyle] *107 [Gibson] 1656—ab
  solution in treatment of wounds, [Hirschberg] (61) 742
DAMAGES for breach of alleged contract of employment, 935—Ml
DANDER OFF 135—P
DARIER'S DISEASE See Keratosis
DEAF hear better in railroad trains, [Burger] (115) 496
DEAFNESS auditory reeducation with electric sonorous vibrations, [Holmgren] (103) 886
  detection of simulation of, [Gosset] (46) 942
  nerve and effects of high explosives, [Wilson] (1) 1291 1182—E
  war treatment of, [Baratoux] (35) 1877
DEATHS and births in Ontario 1915 45
  diagnosis of on firing line, [Satre] (67) 153
  rate during war 861
DECIDUOMA malignum analysis of 500 cases [Findley] (3) 1942
DEFECTIVES See Feebleminded
DEGENERACY See also Feebleminded
DEJERINE death of 791 1053
DELAWARE recognizes National Board of Medical Examiners, 1649
  state board December report 868
DELIVERY See Labor
DEMENTIA paralytic treatment of, [Houckgeest] (83) 1220
  precox stratigraphic analysis of finer cortex changes in normal looking brains in [Southard & Canavan] (69) 807
DEMODEX folliculorum skin eruption associated with presence of great numbers of, [Lawrence] (18) 739
DENGUE fatal hemorrhagic [Goldsmid] (22) 739
  in Argentina, [Kraus] (29) 70
DENTAL hygienists, 1566
  supplies women's services in manufacture of for military health service, 299
DENTIFRICES, 'patent and proprietary medicines to be taxed 1491
DENTISTRY physicians and surgeons restricted in right to practice 998—Ml
  prosthetic conditions to be studied in [Potts] *188
DENTISTS for army, examination of 1191
  unqualified, and cocain, 1196
DENTITION first, and abnormal conditions therein [Karnitzky] (82) 318
DERMATITIS and eczema of external origin [Knowles] *79
  due to lampblack 799
  exfoliating, in newly born and its relation to pemphigus [Wirz] (57) 229
  pathology and pathogenesis of eczema and, [Heimann] *75
  pellagrous epithelioma developing in [Lynch] (49) 1781
  venenata vaccines in [Strickler] 1503—ab
DERMATOLOGY actinic light rays in value of 1341
DESENSITIZATION of guinea-pigs sensitized to dog's serum [Coca] 1578—ab
D ESPINE sign valuable aid in diagnosis of pulmonary and tracheobronchial glandular tuberculosis in children, [Bloom] (110) 1583
DEXTROSE retention, [Macleod & Fulk] (15) 486
DIABETES INSIPIDUS, [Maranon] (119) 946
  case of with peculiar necropsy finding in posterior lobe of pituitary body [Weber & Schmidt] (11) 222
  influence of pituitary solution on urinary excretion in [Barker & Mosenthal] 1871—ab
  infundibular tumor in child causing diabetes with tolerance of alcohol [Newmark] (11) 1505
DIABETES MELLITUS absolute with return of function [Christie] *170
  acids and alkalies in, 1411—E
  acute with enormous elimination of nitrogen report of case with temporary recovery [Jonas & Pepper] *1896
  Allen starvation treatment of [Martin & Mason] (13) 310
  [illegible] philis, (39) 400 [Rosen- [illegible] bloom] *1232 [illegible] ociation be-
  and tuberculosis as[illegible] tween [Cohen] 1869—ab
  broader aspects of treatment and results [Greeley] *1685
  cancer and [Robin] (42) 1585
  clinical significance of glucose-nitrogen ratio in [Janney] (12) 310
  complicated by pulmonary tuberculosis peculiar skin condition occurring in [Rosenbloom] *1476
  D N ratio in [Mosenthal & Lewis] (25) 1942
  dehydration of blood and organs in diabetic coma [Chauffard, Le Conte & Dorie] (61) 1586
  dietetic treatment in, [Williamson] (4) 879
  fat in [Allen] (9) 936
  fatal case of associated with large cell hyperplasia [Williams & Dresbach] (15) 310
  home made bread substitutes for [Williamson] (10) 314 [Nicholson] (16) 581
  in children [Kleinschmidt] (66) 493 [Joslin & Gray] 1869—ab
  increased diastatic activity of blood in nephritis and [Myers & Killian] (44) 1064
  influence of acidosis on hyperglycemia in [Epstein & Felson] (14) 310
  lipemia in 718—E
  maintenance diet in [Mosenthal] 1869—ab
  metabolic changes produced by Allen treatment of [Cammidge] (16) 1584
DIABETES MELLITUS, metabolism in 3 unusual cases of [Gephart & others] (30) 1872
  modern treatment of, [Leyton] (14) 1006
  pancreatic, [Ujihara] (96) 885
  pancreatic in dog [Murlin & Sweet] (71) 66
  prevalence of statistics on, [Gottstein & Umber] (27) 70
  relation of acid base equilibrium of body to carbohydrate metabolism, and its application in [Underhill] *497
  share of proteins in production of diabetic coma and, [Pauly & Boulud] (59) 1350
  sodium carbonate in [Murlin & Craver] (72) 66, 1481—E
DIAGNOSIS clinic broad conception of [Pollock] 934—ME
  group study report of 150 cases [Behlow] *360
  of physician, not bound by 871—Ml
DIAPHRAGM hernia large traumatic, [Casares] (72) 1442
  hernia, strangulated with operation and recovery report of case, [Hawkes] *369
  paralysis [Ferrannini] (98) 1352
  paralysis hypertrophy of right ventricle from [Kure & Hiramatsu] (78) 1514
  suture of after war wound [Ortali] (49) 1878
  tonicity of and splanchnic nerves [Kure Hiramatus & Naito] (79) 1514
DIARRHEA, acidosis with, [Schloss & Stetson] (2) 936
  dyspeptic in children, [Blanc] (27) 315
  flagellate diagnosis and treatment of [Chase & Tasker] *1528
  in infants from general infections [Berheim-Karrer] (57) 1295
  treatment of in breast fed infants [Marfan] (36) 942
DIARSENOL, 1407
DIET See also Nutrition and under names of diseases
DIET, adequate new features of 1700—E
  adequate protein minimum in [Hindhede] (80) 1880
  effect of muscular work hemolysis and diet on serum proteins, [Rowe] (6) 1505
  effect of war on dietary prejudices 1912—E
  hygienic meal [Maurel] (18) 1510
  in tropics, [Ruiz] (94) 1073
  nitrogenous foods in requirement of [Maurel] (39) 583
  restricted 1194—E
  Schmidt 931
  war advantage for some children between 2 and 6, [Pfaundler] (42) 812
  war effect of on sick 472
DIETARY [illegible] clever ruse in, 642—F
  rel[illegible] [illegible]ary among [illegible] terdal] (137) 410, [illegible] Taylor] *1898
DIGESTION, studies of, [White] 1776
DIGESTIVE TRACT See Gastro Intestinal Tract
DIGITALIS action of, on the frog heart [de Boer] (104) 1671
  and water as diuretics [Lichtwitz & Zachariae] (72) 744
  in arrhythmia [Boruttau & Stadelmann] (37) 881
  in pneumonia [Cohn] 143—ab [Cohn & Jamieson] (41) 224
  physiological standardization of [Krogh] (114) 1672
  standardization of and potency of Minnesota leaf, [Morris] (69) 1065
  therapy extreme prolongation of conduction time in bundle of His resulting from, [Barker & Bridgman] *903
  wild American 1697—ab
DIPHTHERIA antitoxin selection of horses for production of by intrapalpebral toxin test [Hitchens & Tingley] 1660—ab
  antitoxin serums refinement and concentration of 38—E
  antitoxin treatment for contradictory facts in regard to, [Clark] (76) 814
  bacilli elimination of in discharging car 568
  bacilli virulence of, from diphtheria patients and diphtheria carriers [Weaver] (62) 660
  carriers chronic myasthenic bulbar paralysis in [Gerson] 741

DIPHTHERIA carriers treatment of [Lall & Canal] (43) 3
in school for deaf and dumb report of outbreak [Stovall] *1084
nasal isolated [Rolleston] (3) 1354
paralysis following vaccine therapy of [Maggiore] (4) 1517
Schick's reaction for testing immunity to simplified technic [Ulterer] (1[illegible]) [illegible]
toxin production of arteriosclerosis and glomerulonephritis in rabbit by intravenous injections of [Bailey] (44) 2[illegible]4
DIPHTHEROIDS and Hodgkin's disease [Cunningham] (14) 156
organism isolated from sputum of patients with bronchial asthma [Walker & Adkinson] (52) 661
DISEASES incompatible 481
rat inspector of states rights 4[illegible]—ab
DISINFECTANT See also Antiseptics
DISINFECTANT alcohol as insecticide and [Arkhipants] (88) 1515
DISINFECTION See also Sterilization
DISINFECTION facts and fallacies in [Hamilton] (11) 1210
terminal [Hamilton] 611—ab
DISPENSARY on war basis use of volunteer workers [Smith] 1772—ME
DISTRICT OF COLUMBIA April examination 1[illegible]5
January report 1431
medical news 41 126 205 309 556 1049 1132 1563
October report, 215
DIURETICS digitalis and water as [Lichtwitz & Zacharias] (42) 711
hypophysis as regulator of specific gravity of urine and diuresis [Bab] (47) 812
study of 1047—E
DIVINE healing alleged using mails for fraudulent scheme of 305—MI
DODDS PARKER suspension appliance for fractures [Davison] *903
DOMESTIC Medical Society 1201—P
DRAFT qualifications under 1918
DRAINAGE abdominal position in [Hill] 145—ab
filiform in military surgery 1335
for pus conditions in pelvis during pregnancy [Reder] (2) 146
DROPPER for oil [Ullman] *1177
DROPSY alimentary [Knack] (73) 73
DRUG absorption through skin (endermic reactions) [Sollmann & Pilcher] (86) 1212
crossed tolerance for study of 36—E
fraudulent traffic checked 130
habit forming conference on 1491
habit forming proposed investigation of 293
in wartime [van der Wielen] (81) 1443
nine useful 55
stains to remove from skin and linen [Mankiewicz] (70) 743
supply difficulties of due to war 1274
therapy present status of [Coleman] 1636—ab
DRUGLESS healers in Saskatchewan 1135
healers stronger test for 482
DUCTUS arteriosus patent symptomatology of [Forschbach & Koloczek] (92) 408
DUODENAL alimentation in severe dyspepsia occurring after gastroenterostomy [Einhorn] 1776—ab
cultures in typhoid [Garbat] 1206—C
tube gastric and duodenal infusion from [McWhorter] *1395
DUODENUM dilatation of stomach and acute postpartum [Ramos] (91) 1151
perforations acute and subacute of stomach and at Massachusetts General Hospital [Richardson] (23) 658
perforations of stomach or latent period in, [Kennedy] (17) 1292
syphilis of report of case [Mortimer] (25) 1662
transverse spontaneous anastomosis between colon and [Fishbaugh] *624
ulcer and tetany [Bine] *1315
ulcer diagnosis of [Nowaczynski] (30) 70
ulcer in infants [Brown] (29) 1434
DUODENUM ulcer of stomach and [Finochietto] ([illegible]) [illegible]
ulcer of stomach and chronic report of 2 cases [Coffey] (1[illegible]) [illegible]
ulcer technic for gastroenterostomy and exclusion of pylorus in [Pauchet] (56) 1034
DUPUYTREN life and works of [Hutchinson] (23) 1607
DUPUYTREN'S contraction of palmar fascia [Hutchinson] (24) 1607
DURA roentgenographic demonstration of subdural space in diagnosis of intraspinal lesions [illegible] *[illegible]
DUST dangers of 291—E
in mines and metallurgical plants 1[illegible]—ab
DWARFISM case of from achondroplasia [Magnus] (13[illegible]) [illegible]87
DWARFS basal metabolism of in lesser men and specific dynamic action of protein [Aub & DuBois] (24) 1842
DYING declarations fallibility of 210
DYSENTERY [Rodenacker] (2[illegible]) [illegible]
amebic emetin bismuth iodid in [Low] (58) 1348
amebic in France [Renaut] (23) 1216
amebic of suprarenal type [de la Rivière & Villerval] (1[illegible]) 1487
bacillary acute treatment of [Fisher] (8) 751 [Finlayson] (9) 751
bacillary epidemiology of [Smillie] (2) 120[illegible] 1504—ab
bacillary treatment of [illegible] (60) 230
flagellate [Chatterjee] (25) 1606
gastrointestinal sequels of paratyphoid and [Carles & Froussard] (35) 1008
ipecac in 374—E
paratyphoid fevers and [Carles] (66) 11[illegible]0
protozoal findings in 910 cases of [Carter Mackinnon Matthews & Smith] (5) 341
roentgenography in [Holland] (1) 911
DYSPEPSIA severe occurring after gastroenterostomy duodenal alimentation in [Einhorn] 1776—ab
DYSTHYROIDISM roentgen rays in [Palmer] 1777—ab

DEATHS

Abbott Francis M 1056
Abbott Clarence 727
Abbott Everton Judson 794
Abbott George B 2000
Abney Ezra Styles 1771
Acton Samuel Watson 1645
Adams Carl Shadiker 212
Adams David Seely 563
Adams Ellsworth Smith 301
Adams Theodore Louis 1277
Adams William Thomas 1195
Adelson Jonas 1055
Adye George Francis 1138
Ainsworth Oliver N 1931
Alderson Joseph D 1496
Aldrich Herbert Eugene 1646
Aldrich John O 477
Alexander George E. 1496
Allard Frank Ellsworth 649
Allen Courtney T 1646
Allen Duncan S 477
Allen Edgar 1336
Allen Jacob S Jr 863
Allen John T 1055
Allen Julian Howard 649
Allen William Henry 728
Allison William Russell 387
Allred Joseph L 863
Alvarez J M. 646
Ames Charles Stafford 649
Ames Edmond H 926
Amos Henry H. 211
Anderson Alexander 650
Anderson Arvid 477
Anderson John William 1426
Anderson Perry Llewellyn 1200
Anderson Winslow 1569
Anderton George A 301
Anderton William Bancroft 794
Andrews James Alfred 1496
Andzulatis Joseph J 301
Applewhite J W 1771
Appley Otto 477
Argento G 1138
Ash Dunham E. 1336
Ashby Daniel S 863
Ashley Don E 1646
Austin Col. J H E 1642
Avery Edward Woodbridge 727
Avery James Willard 301
Ayres Daniel Francis 794
[illegible] Marden 1199
Babson Henry Theodore 470
Bailey George W 49
Bailey Robert 1441
Bair Alfred Sylvester 863
Baird Robert H 1199
Baldridge Felix Edgar 2000
Banker Adoniram Judson 1126
Baker Joseph W 1138
Baker Willard Remington [illegible]
Baker William Edward 1[illegible]0
Baldwin Evelyn 1137
Baldwin Thomas Richard 993
Ballner Emil August 926
Banks Edwin Mayo 212
Barnard William H 727
Barnes Charles F 1569
Barnes Rollin H 1570
Barnes Thomas Benton 2000
Barnett Allen A [illegible]
Barnett James R 4[illegible]
Barr Abraham Mylin 794
Barrentine J Thaddeus [illegible]
Bartlett Thomas W [illegible]
Barton Charles Edward 728
Baskett George W 1200
Bassford Samuel Joseph 1427
Battelli A [illegible]
Bayliss Bradford LeBaron 649
Beach Julian 1199
Beal George H 926
Bean Tarleton Hoffman 211
Beck Sigmund 1127
Becker Hiram 1646
Becker John 212
Becker Julius Alexander 134
Bedard Joseph 1531
Bell William Appleton 1127
Benario J 2[illegible]
Benbrook Jarrett T 2000
Bender Harry Leach 1200
Bennett Charles F 49
Bennett William Otho 727
Bentley Lieut Col Edwin 726
Bentley Frederick David 134
Betts Thomas F 926
Bianchi M 1334
Bigelow James A 1496
Bigham William Hassert 1647
Billingslea James Howell 563
Billingslea Martin Taylor 563
Billingsley James Strong 563
Bingham James 212
Birnie Clotworthy 993
Black James Cyrus 727
Black Orlando F 1646
Blackwell Zadok Thomas 727
Blair Samuel Tate 1199
Blaisdell George Clark 1178
Blandy Captain C S 1710
Blickensdorfer Charles Henry 1276
Blodgett Albert George 726
Blossom William R 563
Bock Carl M 993
Bode William C 1771
Boeck C J M 1567
Boggs Joseph D 49
Bond David Kline 1138
Borland John R 134
Borden Hon Frederick William 133
Bortz Daniel W 993
Boskowitz George Washington 1055
Bothwell Dana F 1277
Bourke Major James 1930
Bowles James Locke 1277
Boyce David Chancellor 301
Boyd James Greenup 863
Boyd Hiram Munson 477
Brabson A C 1138
Braddock Charles Shreve Jr 1055
Bradfield George Milton 1771
Brandt Washington Jones 795
Branscombe William Cower 1277
Brault J 1196
Brennan James E 1646
Brinkman Morris Weil 727
Brodeur Raphael 794
Brown Charles Wesley 387
Brown Cyril I 1646
Brown P A Surg Earle Mason 1199
Brown Francis Henry 1770
Brown James Logan 301
Brown Warren Bateman 49
Brumsted T B 1710
Bruno August Ernst 1199
Bruner Charles Keepers 1771
Bruner Oliver Glenn 2000
Bruns Prof 473 297
Brush Henry Mortimer 1138
Buckingham Edward Marshall 133
Buckley John Jay 1336
Buckmaster Reuben E 1277
Budington William Gunton 1496
Burch Sidney J 1138
Burchett Edwin 1570
Burdick William Packer 1336
Burdick William Thomas 1646
Burfield Humphrey M 794
Burleigh George Henry 1570
Burnett Henry Winans 1569
Burnett William Walton 863
Burney Thomas Morrison 387
Burns George G 863
Burns Oramon Weed 794
Burroughs William Berrien 563
Burton Walter F 926
Burwash Henry J 562
Buschman William Edward 863
Butler Jacob [illegible]
Caffey Hugh H 1336
Caldwell Charles F 212
Cameron John 1138
Cammett William 1336
Campana Eugene George 649
Campbell Eugene Boyd [illegible]
Campbell Oscar B 926
Campbell William C 1138
Canaday Nathan F 301
Capell John 134
Carder John B 863
Carper Andrew J 1138
Carter Oscar Newton 1138
Cassidy John 1277
Castle Otto Leslie 1427
Cauch Robert 650
Cavanaugh Richard Edward 212
Cave Thomas R 387
Cervera F [illegible]
Chaffee Francis 649
Chambers Edward Sutton 926
Chambers John Wesley [illegible]
Chandler Walter Stephen 1336
Chaney Irving Drury 387
Chaplin Claudius Barrard 10[illegible]
Chapman Albert Taylor 2000
Chapman Eugene Adelbert [illegible]
Charteris Charles Richard 505
Chase Sherman F 1426
Chauveau A 472 477
Cherry T M [illegible]
Cherry William Samuel 925
Churchill Wesley R 49
Clapp Elmer Frederick 1276
Clark Hulbert H 211
Clarke Elmer A 301
Clarke Powhatan 1496
Clary George 212
Clawson James F 1277
Clement Victor L 863
Clover William M 795
Clyne James A 134
Coates William John 49
Cochran John F 1496
Cochran Samuel L 49
Codding George Henry 1496
Coffeen Charles Rollin 863
Coffin Frederick Walter 926
Coholan Michael J 1496
Colt Henry Leber 925
Cole Michael Francis 1771
Coleman Frederick Frelinghuysen 49
Coleman James Cash 1055
Coleman W Franklin 300
Colgan Walter John 477
Collings Samuel Losey 993
Collins Stacy B 476
Colman Frederick William 1646
Colquitt Landon Augustus 1127
Combe A 1196
Conkey Caroline Root 1276
Conn Herbert William 1417
Cooke John M 477
Cornelius Maximilian C 1200
Cornell Jacob Bell 477
Corona A 1612 1274
Corwin Frederick Miller 387
Cosby Forest C 1931
Couch Asa Stone 562
Courmont J 990 1033
Covert Samuel J 476
Cowie Alexander M 1055
Cox Braxton D 727
Cox Columbus A 1138
Cox Samuel S 1336
Coyle Charles Graves 1055
Crabb James N 387
Craft Herman 1495
Craig William Henry 650
Cramer Carl Paul Rafael 1646
Crank Charles Dake 1645
Cranmer Norman J 134
Crawford Annis Hyman 728
Crawford John Jay 387
Crawhall George Wilbur 476
Crighton Andrew John 650
Cromwell Benjamin M 1570
Crosby John Abbott 1570
Crouch Aziel Henry 1771
Crowell Samuel McKee 1930
Crowley James W 1931
Crowther Isaac 1138
Cruet I 1567
Crump William L 926
Cruz Oswaldo 646
Cuffman John Henry Clay 1055
Culbertson Edward Calvin 794
Cullen John C 387
Cullum John Arthur 300
Cummings Erastus H. 212
Cunningham Thomas Edward 863 1138
Curtis John Thomas 794
Curtis Walter H. 1056
Cutter Ephraim 1426
Damrell Carter E 49
Darby A. Byron 1569
Davies Robert E. 2000
Davis Frederick E 1056
Davis George Henson 563
Davis Sylvester Byron 1496

Davis, S M, 1931
Davis, W N, 727
Davison, John Lorenzo, 1645
Dawson, John Lawrence, 1426
De Armand, John A., 1055
De Giovanni, Achille, 297
Dejerine, Jules 791 1053
DeLaperriere, William P, 650
Dellenbaugh Charles C, 134
v Delsaux, 1567
Demarest, Walter, 1645
DeMund John Theodore, 1495
Denebrink, Frank G G, 1570
DePuy, Anson A., 1496
del Risco, Justo, 1427
Deming, Charles C, 993
Denney, Robert Stevenson, 650
Denny, Charles Frederick 1138
Derickson, Samuel, 1570
de Sandro D, 1136
Deuel, Walter Estus, 1138
Devine, John J, 563
DeVore John R 650
Dewey Henry Wells 1336
Dewey, James R 727
Dewey Samuel J, 477
Dial, Virgil Andrew, 387
Dickinson Amelia Ann Duran, 563
Dietrich William, 926
Dillenback William J, 134
Dillon, Richard Hastings, 1138
Dobson, Joseph, 134
Dodds, Joseph Spratt, 1496
Dodge John Richardson, 650
Donham, Benjamin Fugene 1200
Donnell, John Harvey, 1771
Donnelly, Michael J, 1138
Doores, William M, 728
Dorland, James, 49
Dorsey, James Kiron 212
Douglas Edward William, 1427
Dowling, Francis, 1276
Dozier, Leonard Franklin, 993
Dreher Joseph Coloni, 1200
Ducker, John C, 1277
Duckett Thomas B, 1056
Dumortier Jean J, 211
Duncan James Madison, 1930
unn, John Williams, 926
er, Daniel 477
, Peter Franklin, 993
Alphonse Louis, 212
s John D, 1336
, Theophilus H, 1646
Eaton John Ryland, 993
Ehrlich Paul 1045
Eiseman Reuben, 134
Ellinwood Charles Norman, 300
Elliott John Milton, 650
Ellis Sylvester L, 1931
Elison, Charles Ruxton 650
Elmer Clyde Jason 1336
Ely, Henry Oliver 1336
Emery, Wilfred Newell 2177
Emory George Woodhull, 727
Endicott, Richard Henry, 1056
English, Gustavus Pierce 794
Erb, Horace B, 476
Ernest, Jasper Glenn 649
Estabrook, Leonard W, 387
Evans, Almus Pratt, 728
Evans, Lieut-Col D B Chiles, 1642
Evans, Florence Louisa 926
Evans Frank Webster 1055
Evans, Franklin J, 1930
Everett, William Washington, 1199
Ewing, Captain J, 1710
Faerber, Joseph 1200
Fall, Edmund Elwood, 794
Fanning Frank 650
Farley, Benjamin F, 476
Farnsworth Dexter Boylston, 476
Farrington John M 1569
Faulds, William H, 650
Faulkner Richard Biddle 49
Feagin, Ernest Samuel, 212
Fechtig, James Amos, 477
Felt, Rae, 1496
Fergus, James A, 1930
Ferry James Francis, 387
Fielder, Frank Sidney, 476
Fisher Charles D, 1570
Fisher, Roy Gavin, 212
Fisher Wyman H 301
Fisk Roy Earl, 1200
Fitzmaurice, James W 134
Fitzsimmons Thomas Charles, 1770
Fletcher, Cora Sechrist 1771
Flint John Franklin, 1277
Flood Frank Henry, 1646
Fochtman, Frederick W, 212
Fogarty, William Ralph, 387
Fooks, John W, 925
Ford, Frank Albert, 649
Ford, Noel Bertram, 1277
Foster, Burnside 1930
Foust Philip G, 1138
Fox Lieutenant Colonel A. C., 1710
Fox, Gustav Theodore, 863
Frank, James H, 1199
Franklin, Surg-Col Sir Benjamin 791
Frederick, Charles Cleveland, 212
Freeland, James Roy, 1862
Freeland, Nicholas Henry, 563
Freeman, Benjamin Franklin, 1646
French, Justus Crosby, 1138
French, William J, 926
Friend, George Edward, 1277
Frost, C E, 1277
Frost, George Mattocks, 1931
Frost, Henry, 1427
Frost, Henry Pinckney, 1862
Fugate, John T, 212
Fulkerson, Heman Walbridge, 1199
Fulton, Henry D, 301
Gairal, 1567
Gaertner, Alexander, 212
Galbraith, Archibald Mitchell, 477
Galbraith, Daniel 993
Gale William, 1570
Galer, Frank M, 211
Gamon Frank 134
Ganz, Peter Sebastian, 134
Garland, David Geiger 1862
Gaucher Josaphat A., 49
Gaupp Prof E, 473 297
Gay, Herbert Seymour 1336
Gebauer Emmanuel H, 993
Geer Ethelbert Fremont, 134
Geikie, Walter Bayne, 1137
Gelpke, O 1710
George Edward, 794
Gessner Frank Edward, 925
Gibbs Charles Henry, 650
Giddings Aurora W 795
Gillen, Richard H 1771
Gillum William H, 1199
Gilnack, Frederick, 795
Glidden Stephen Clifton 727
Glover, Samuel Rideout 301
Gochenauer David 993
Goddard, William Lidderdale, 563
Godfrey, Henry T, 1426
Goldschmiedt Leopold 1199
Good, Joseph Martin 1426
Goodenow, Daniel 1931
Goodrich, Charles D, 1056
Gordon, A., 1136
Gordon Andrew Robertson 1055
Gordon Eliot 925
Gordon George Garrett 1055
Gordon Johnson W, 1931
Gore, David C, 1931
Gorrell Andrew Glass, 1138
Gove Roland Sumner 387
Grabenstatter, George W, 211
Gray, Clinton G 300
Gray, John Sidney 727
Gray, M F, 1771
Gray, Simeon, 1200
Green, Myron Douglas 1931
Green William T 1200
Greene, Jared Alonzo, 795
Greene Simon Harry Jr, 926
Gregory, Ward Slosson, 387
Grisard, James W, 49
Guillaume Clement T, 1771
Haas Leopold Frederick William, 387
Habel John Marlin, 1496
Hackman L K H, 1642
Hagenbach-Burckhardt E, 297
Haight, Arthur Mott, 794
Haight N Herbert, 301,
Haile Joseph E W, 795
Hale, George Carleton, 477
Hale, G T, 1138
Hall, Erasmus D, 301
Hall Rezin Warfield, 1496
Hallett, Thomas H 727
Hallock, Louis Henry, 1200
Ham Albert Eugene, 993
Hamilton, Alfred James 1646
Hammond, Wilbur C, 649
Hampton Soloman E, 1056
Hansen, John Harvey, 1199
Hanson, Frank, 993
Hanzig, Gustav E 1931
Hardeman John Locke 301
Harding Relief B Leeds, 477
Hardy Irene, 926
Harpel, Francis Eugene 1277
Harrington, Augustus W 477
Harris Andrew Fuller, 2000
Harris, Bln A, 477
Harris Harvey Lindsey, 728
Hart, Edgar 563
Hart, William S, 563
Harter Frederick J, 562
Harton Julia Phiania, 1200
Hartwich C, 1334
Harvey, Lee B 49
Harvey John W, 1496
Harwood, W S, 727
Haskins Frederick, 49
Haupt, Walter Clark 1931
Hause William 1200
Haverfield, Joseph Wallace 1496
Haviland Everal Caleb 1862
Hawley, George Fuller 1199
Hayden, Holliday H. 49
Hayes Francis Mason 49
Hayne W L 49
Hays, Henry Everett, 993
Hazelton, Hiram J 795
Healy John Hopkinson, 863
Hearne Joseph Carter, 1645
Heasley, H W, 1138
Hedgpeth, James H, 301
Heim-Vögtlin, Marie, 297
Henderson, James A, 1277
Henry, James, 133
Herkimer, Robert Henry 387
Hermsmeier, Erich A, 212
Herzberg P, 297
Hewetson, Lieut.-Col Samuel W, 1641
Heysinger, Isaac Winter, 1862
Hiestand, Howard Edwin, 49
Higgins, Luke Channeller 1570
Hildreth George Kelsea, 1336
Hilliard Sumner Hale 1277
Hines, Brainard W 1277
Hinkle, Abbie A., 1200
Hirtz Dr, 384
Hitchcock, Alfred Owen 862
Hixson Manford M, 649
Hobbs, John O, 2000
Hochheimer, Emanuel, 1862
Hodge Thomas Stanley, 1496
Hodson, Capt. T G S, 1710
Hoehn Aloysius, 728
Hoffmann Julius L Philipp, 563
Hoffmeyer, John A 563
Hogan, Francis James, 1138
Hoge Wilmer Brown 1336
Holder Richard Eli 2000
Holland Frank 1862
Hollister, Louis Eugene 727
Hollmers William David, 49
Hollopeter, Ralph Root 993
Holloway Samuel Warren, 1645
Holmgren Charles J, 563
Holton Henry Dwight 649
Home Robert Jr 1862
Hoole John Edward 728
Hoover, Thomas Carroll, 2000
Hopkins Alfred Grant 1771
Hopkins, Benjamin Franklin 212
Hornor, William H 1138
Horton Theron W 926
Hoshall John L 212
Houghton, Charles W, 2000
Houx, Isaiah Franklin 1199
Howe John Edmond 1199
Howland Francis Lamb 212
Hoy Albert Harris 1930
Hubbard William Fremont 1646
Huber Joseph Emil, 862
Huet E 922
Hume, William Robert 728
Hummell Wilfred Cumbermede 477
Humphrey Charles Edward 563
Hunt William A 1138
Hunton Capt. F 1710
Hurt Amplias Alonzo, 1138
Hutton, H R 1710
Hutton John W 1771
Hyndman Duncan 1277
Ickes George Albert, 300
Ilg Theodore 1137
Ingle Henry 1771
Irick George W, 301
Irvine E Lloyd 134
Ingram William F 212
Iserman J C 1138
Izlar Roberts Poinsette 1569
Jackson Henry H 1507
Jacob Thomas Nathaniel 649
Jacobs Minor M, 727
Jäger G 1567
Jameson William G 727
Jay David Arthur 1862
Jenkins, James Morris 727
Jenness Sarah Abbie 212
Jerman Noble Theodore 301
Jeserich Emil 1277
Johnson George H T, 863
Johnson John Everett 1200
Johnson, John George 1055
Johnson Nathan 1645
Johnston William A 1200
Johnston William Henry 926
Jones Ambrose 301
Jones Cummins Butterfield, 134
Jones Maj H 1641
Jones Herbert 926
Jones, H R 1567
Jones, U Odell 863
Jones William A 387
Judkins Martin Piper 1495
Justice Harry Chester, 2000
Kane Thomas J 1862
Kaarsberg, J 1420
Kaull, William M 925
Keator Harry Mayham, 1862
Keim, Charles J, 1055
Keller Anthony 387
Keller Martha E 1277
Kellogg Helen Reynolds, 726
Kennedy R C 1570
Keppel John Winfield 1200
Kerr William J W 387
Kerr William Watt 1495
Kienzle Frederick W, 387
Kilty, Harry F 1570
Kimball James H 387
Kinder Roscoe George 1427
King, Dan Osro 1277
King George Philip 1771
King Robert Wirt 1771
Kingsbury, William Sanford 1496
Kingsley Royal J 1570
Kinsey, R H, 1642
Kintzing, Pearce, 476
Kinyon, Elias L 212
Kissling Charles L, 387
Klemp, Herman F 477
Kluttz, William Clarence 212
Knapp, John Beach, 49
Knisley Andrew Benjamin 387
Knodle Ephraim A, 1277
Knott, David C 49
Koelle, John W, 301
Koempel, Robert August 727
Koenig, Caroline M Osborn, 650
Koontz, Alexander Ferguson 1055
Kornemann, Henry August 300
Krudop D Tonjes 49
Kutz, Wilson L., 212
Kuykendal, Clarence M. 301
Labadie-Lagrave Frederic 1643 1567
Lally Thomas John 1496
Lamb, Aura Roswell 1771
Lamberson Harry M, 1569
Lambert, Isaac C 794
Lanaux Michel Thomas, 649
Landon, Hannibal, 301
Landouzy, Louis 1492
Landt, William 795
Lane, Albert Clarence 562
Lane, Frederick Pollock, 476
Lane, Harry, 1771
Lane, Wallie C, 1138
Langstaff, Lewis Garibaldi, 1137
Laning, Henry, 300
Lansdown, F P, 1642
Larkin, Percy, 2000
Lartigue, Etienne, 1771
Latham Mary A., 563
Lauer, Johan Adam 563
Lay James E, 49
Leaman, Rosh 650
Lee, Leroy M 1200
Lee, Lewis, 1771
Lee Walter W 795
LeFevre, Frank W 49
Lefour, J 922
Lehman, Joseph S, 1496
Leister William Lee Roy, 1056
Leland, Clarence Henry, 387
Lemon Rufus M, 477
Leser E, 472, 924
Lewis, Bertha 726
Lewis, Freeborn Stanton, 1496
Linder Sum S, 1496
Lewis Warner 134
Lindley, John William, 1276
Linley Charles Henry 49
Line, Lemuel M 1277
Lisle Lute Postle 728
Lithgow, Robert Alexander Douglas, 726
Lively, William T, 993
Livingstone, Peter John, 211
Lloyd, Seth Louis, 300
Loew Alexander 1646
Logans, Cassius J, 563
Lones, Captain P E, 1710
Long, Dayton Joseph 1276
Long, John Sample, 925
Lounsbury, Henry A, 301
Lowenrosen Michael, 1277
Lublinski, W 472
Luce, Townsend M., 387
Ludington Horace 1771
Lunney, John 795
Luyties Carl Johann, 133
Lyon, Edwin Bradbury, 1495
Lyon Arthur Vinol 1138
Maas, Abraham 1930
Mabon, William 562
MacDonald, Edward V, 1426
Macknight, Thomas William Fingland 301
MacNicholl, Thomas Alexander, 1276
MacRae Captain P C 1710
Macy, Charles S, 1138
Maddox William D, 2000
Magee, Luke F 863
Magnus E. R Max 1055
Mairs, Henry Thomas, 795
Makuen, George Hudson, 726
Mallet, Ovila, 1277
Mallory, John N 1496
Manning John Thomas 1199
Marsh Herbert Hallet, 301
Marsh, Howard 794
Marsh, Joseph W, 926
Martin, Charles E., 649
Martin Constantine Henry 649
Martin, Ernest Edwin 562
Martin Francis P, 863
Massel F 1196
Mathiott, George Henri, 2000
Matson, Charles M 1199
Matson Eugene G, 925
Matthews, William T 1771
Mattson J Albert 1138
Maulsby Udams E, 728
Mayo Edward Nealley 2000
McCabe, Edward Michael, 2000
McCain Thomas J 650
McCann Alfred Ernest Arthur 1496
McCarthy Henry Thomas, 863

- TRANSPOSITION of viscera with duplication of left ureter [Komendantoff] (101) 1666
- TRAUMA atrophy of liver following [Curschmann] (100) 611
  - central nervous system lesions following classifying nomenclature of [Darkshevitch] (51) 1434
  - contractures following treatment [Léri] (43) 538
  - deforming arthritis and [Senger] (40) 1357
  - glaucoma due to [Goldzieher] (106) 848
  - hypertrichosis after with or without nervous lesions 44 cases [Lebar] (33) 843
  - in lung tuberculosis [Orth] (125) 611
  - in syphilitic patients [Glenn] (52) 533
- TREMATODE genus Telorchis with descriptions of new species [Stunkard] (86) 535
- TREMOR diagnosis of case of [Williams] (131) 1275 (171) 1355
  - posttyphoid resembling paralysis agitans [Cros] (121) 611
  - tracings [Crenshaw] (103) 773
- TRENCH fever [McNee] (1) 921
  - fever and albuminuria [Chandler] (20) 1061
  - Foot See Foot Trench
  - frostbite 512—E
  - hygiene 369
  - latrines management of in semi-permanent camps [Montgomery] (103) 691
- TREPHINING operation task of assistant at [Rotter] (72) 1664
- TREPONEMA Pallidum See Spirochaeta Pallida
- TRICHINIOSIS case of [Wohl] (86) 439
  - cerebrospinal fluid in [Lintz] *1856
  - diagnosis [Bloch] 837—ab (40) 1820
  - with trichina larvae in cerebrospinal fluid [Elliott] *504 [Cummins] *1856
- TRICHOCEPHALUS dispar found in 43% of 160 children in Denmark [Hansen] (135) 318
- TRICHOKYPTOMANIA [Sutton] *185
- TRICHOMONAS dysenteric diarrhea due to [Rhamy] *1190
- TRICHOTILLOMANIA report of 2 cases [Blaisdell] (50) 1658
- TRIDENS flavus studies on [Viehoever] (61) 1821
- TRIFERRIN 275
- TRINITROTOLUENE dermatitis [White] (31) 987
- TRIPHENIN 117
- TRIPLETS eclampsia with 2 of children being united [Jardine] (26) 1495
- TRISMUS treatment of by continuous traction on lower jaw [Somen] (41) 607
- TRI STATE Medical Society meeting of 751
- TROCHANTER bone cyst of [Bogardus] (85) 986
- TROMMER S test filtering out excess of cupric sulphate facilitates [Sauer] (87) 1359
- TROPACOCAINE hydrochloride 117
- TROPHIC disturbances in nails following injury of median nerve and brachial plexus [Vergely] (31) 1061
  - disturbances with wounds of war affecting nerves of limbs 829
- TROPICAL medicine accomplished tasks of [Swan] (13) 220
  - medicine influence of on general medicine [Nichols] (12) 220
  - medicine institute for at Granada 1714
  - medicine new school of in Calcutta 971
  - sanitation and general sanitation [Gorgas] (151) 460
  - sore din intravenously in [da Matta] (104) 1751
- TROPICS acute rheumatism in [Scott] (35) 606
  - life insurance in [Römer] (112) 698
  - sanitation of effect of sanitary work in Cuba and Panama on [Gorgas] (135) 692
  - suitability of white man for 1935
- TRUANCY and physical defects 1810
- TRUDEAU a wreath for [Benjamin] 427—ab
  - in memoriam [Knopf] *244
  - memorial to 202
- TRYPANOSOME of black rat [Macfie] (1) 606
- TRYPANOSOMIASIS and babesiasis at Accra Gold Coast West Africa [Macfie] (2) 606
- TRYPAN RED distribution of to tissues and vessels of eye as influenced by congestion and inflammation [Lewis] (58) 1780
- TSETSE Fly See Glossina Morsitans
- TUBERCULIN does not mobilize tubercle bacilli [Moewes] (91) 154 [Möllers] (71) 1750
  - in diagnosis of lung tuberculosis [Clovis] (149) 606
  - in eye tuberculosis present status of [Weidler] (142) 536
  - in surgical tuberculosis [Burke] (117) 148 [Bonime] (133) 1431
  - in syphilis [Bloch] (110) 611
  - in tabes return of kneejerk under [Wodak] (118) 611
  - in treatment of tuberculosis [Murphey] (101) 308 [Ridge] (114) 1275
  - reaction importance of immunity anaphylaxis and for dermatology [Carol] (44) 2044
  - reaction intradermal in diagnosis of tuberculosis in guinea pigs [Selter] (66) 845
  - reaction percutaneous and immunity [Carol] (48) 2129
  - Rosenbach s in diagnosis and treatment of tuberculosis of children [Schippers] (101) 232
  - Rosenbach s in genito urinary tuberculosis [Hyman] *1379
  - skin reaction in tuberculosis [Heise] (8) 2125
  - skin test in surgical tuberculosis [Zitronblatt] (126) 850
  - therapy [Jennings] (151) 224 [Bonime] (78) 956
  - therapy eosinophils as guide in [Brosamlen] (79) 1751
  - therapy present status of [Shively] (114) 309
  - use of and relative immunity in tuberculosis [Trudeau] (15) 606
- TUBERCULOSIS [Wettstein] (56) 147 586
  - acute general with left oculomotor paralysis after measles [Moore] (13) 1276
  - alcoholism and [Hart] (111) 1281
  - among heads of families according to income 1927—F
  - and atrophic rhinitis [McKenzie] (17) 1824
  - arsenic compounds in [Arkin] (43) 1273
  - attitude of federal government toward [Porter] (150) 460
  - Bacillus See Bacillus Tuberculosis
  - bedroom of patient with [Jessel] (4) 1493
  - bill introduced to standardize *treatment of* 367
  - biochemistry and chemotherapy of [Dewitt] (49) 1273
  - bladder and kidneys [Vass] (144) 1746
  - bladder necropsy findings after exclusion of [Key] (147) 156
  - bones and joints [Salmond] (8) 2127
  - bones and joints Roentgen ray in [Salmond] (2) 1746
  - bovine transmission of by direct contact and in milk [Ferreira] (89) 1065
  - breast [Bender] (47) 227
  - campaign against 118—E
  - campaign against in Cleveland [Bishop] (81) 62
  - campaign millions spent in 287
  - campaign responsibility of city in [Sachs] (6) 58
  - cattle with eradication of from milch herds [Tracy] (118) 773
  - cervical spine syndrome of coagulation massive et xanthochromie in [Bromer] (6) 982
  - chronic treatment of at Copenhagen [Lundh] (139) 780
  - climate and [Schlesinger] (63) 989
  - community experiment on 1634
  - control of in Victoria [Helser] 2116—ab
  - crippled children with [Gauvain] (1) 1493
  - damages allowed for contraction of due to poor ventilation 1922—ab
  - diagnosis and treatment 5 years progress in by Massachusetts physicians [Hawes] (19) 2058
  - diagnosis biologic method for [Bronfenbrenner] (43) 1428
  - diagnosis early [Thompson] (49) 61 [Lanza] (62) 147 [Evans] (21) 770 [Baerecke] (24) 1272
- TUBERCULOSIS diagnosis early as it relates to service and to naval hospital [Barber] (131) 385
  - diagnosis in infants [Combe] (37) 987
  - diathermia in [Geyser] (124) 1660
  - digestive disturbances in children with [Jeanneret] (50) 925
  - disease of double origin [Byrd] (51) 147
  - dispensary examination of contacts at [Robertson] (3) 1493
  - disseminated miliary [Northrup] (91) 732
  - dust and [Kober] 54—ab
  - early symptoms of [Taylor] (67) 1659
  - early 3 pseudonyms of [Smith] (153) 63
  - epidemiology of [Smith] *77
  - exercise in as inaugurated at Cook County Hospital [Bay] (35) 1657
  - external local treatment of [Strauss] (82) 1589
  - eye conditions dependent on systemic gonorrhea and [Losey] (141) 460
  - eye of nasal origin [Luedde] (25) 918
  - eye treatment [McCool] (140) 460 [Gamble] (121) 692
  - eye tuberculin therapy in present status of [Weidler] (142) 536
  - genital treatment of [Kröner] (55) 1749
  - genito urinary diagnosis of [Churchman] (76) 1058
  - genito urinary diagnosis and prognosis of [McCarthy] (119) 1059
  - genito urinary Rosenbach s tuberculin in [Hyman] *1379
  - glands nonsurgical treatment of [Holding] (71) 1058
  - home treatment of [Pennington] (82) 459
  - Hospital Municipal of Kansas City [Madorie] (103) 1650
  - immunity in [Webb] (30) 221 (56) 1273
  - immunity in and use of tuberculin [Trudeau] (15) 606
  - immunology of therapy as related to [Baldwin] (89) 1058
  - in children [Stern] (92) 69 [McMichael] (57) 147 [Jackson] (101) 223 [Dana] (35) 1890
  - in children prevention of and physical welfare [Kingsley] *73
  - in children Rosenbach s tuberculin in diagnosis and treatment of [Schippers] (101) 232
  - in crippled children [Gauvain] (12) 606
  - in Indian army in France [Hebbert] (11) 1584
  - in infants [Dunn] (1) 601
  - in infants fever as initial sign of case reports [Reuben] (34) 1352
  - in infants localized forms of [Combe] (65) 1825
  - in Island District study of [v Kramer] (145) 544
  - in Madrid [Codina] 1606—ab
  - in negro of Panama Canal Zone [Clark] (15) 220
  - in public schools method of dealing with in Toronto [Minns] (117) 986
  - in war [Fagiuoli] (93) 1751
  - incidence of [Shennan] (10) 537
  - incipient so called [Ritter] 592—C [Evans] 833—C
  - industrial incidence of [McSweeney] 1813—ab
  - infection [Shennan] (2) 1493
  - infection at what time of life does it occur 118—E [Knopf] (81) 307
  - infection modes and periods of [*Ravenel*] **613*
  - initial fever in [Kleinschmidt] (59) 1664
  - institutions in Canada 1475
  - intestine primary case of [Pennetta] (79) 391
  - intra ocular [Jackson] (139) 460
  - joints healed later lesions occurring in [Horwitz] (98) 1167
  - kidney [Overton] (162) 224 [Dixon] 1347—ab [Lyons] (22) 1820 [Furniss] 2125—ab
  - kidney chronic primary localization and mode of spread of [Ekehorn] (96) 69
  - kidney diagnosis and treatment of [Smith] (146) 1355
  - kidney in soldiers [Schneider] (69) 229
- TUBERCULOSIS kidney pathology diagnosis and treatment of [Coleman] (121) 1583
  - knee cure under iodin [Rovatti] (52) 463
  - larynx [Loewy] (102) 308 [Lent] (67) 985
  - larynx alcohol injected into superior laryngeal nerve trunk in [Thrash] (47) 840
  - larynx and pregnancy [Hartog] (117) 993
  - larynx suspension laryngoscope in [Israel] (125) 385
  - larynx treatment of [Edmondson] (55) 147
  - legislation what New Mexico needs most in [Peters] (72) 1353
  - lipase in urine in [White] 2031—ab
  - liver miliary in course of lung tuberculosis [Torrey] (8) 1426
  - lung among Jews [Kreinermann] (34) 387
  - lung and body weight [Kahn] (93) 1275
  - lung and heart disease as contraindications to surgery [Wetherill] (34) 458
  - lung and pregnancy [Norris] (126) 1168
  - lung and wounds of lungs [Reider] (81) 990
  - lung antagonistic action of vagus and sympathetic divisions of nervous system in [Pottenger] (76) 458
  - lung apical dilated heart as sign of [Grossman] (112) 1431
  - lung apical limited lung expansion in thoracimeter in estimation of [Fine] *186
  - lung apical processes origin of [Hart] (91) 69
  - lung artificial pneumothorax in [Paternoster] (107) 697 [Wetterdal] (116) 698 [Ferreira] (133) 780 895—E [Martin] (92) 928 [Lapham] (11) 982
  - lung cavities in lower part of diagnosis of [Mayer] (65) 464
  - lung cavity in left treated by compressing with paraffin filling [drC Kollas] (102) 1590
  - lung climate and [Mills] (79) 1745
  - lung clinical symptoms and physical signs in early diagnosis of [Pottenger] (45) 458
  - lung diagnosis of can it be made early [Wolferman] (115) 1275
  - lung diagnosis of dangers of hasty [Fishberg] (101) 535
  - lung diagnosis of early physical [Kimberlin] (46) 1890
  - lung diagnosis of newer laboratory methods for [Kahn] (47) 2040
  - lung diagnosis of transmission of vocal vibrations through solids in [Glover] (48) 1171
  - lung diagnostic theses in [Brown] (137) 842
  - lung diazo and urochromogen reactions in [Sinclair] *247
  - lung domiciliary treatment of [Dart] (8) 536
  - lung early pathologic changes clinical symptoms and physical signs in [Pottenger] (161) 149
  - lung early patients suffering from symptoms of more thorough examination of [Thompson] (124) 385
  - lung eye findings in 100 patients with [Bedell] (105) 1583
  - lung eye phenomena in [Peter] 1163—ab
  - lung hemoptysis in treatment [Funk] (148) 310
  - lung immune response in [Bonime] (103) 1822
  - lung incipient clinical diagnosis of [Landis] 1164—ab
  - lung incipient diagnosis of [Mayer] (84) 391 [Burnand] (74) 1173
  - lung incipient in children [Juhnke] (54) 147
  - lung incipient latent râle in diagnosis of [Bray] *788
  - lung Kroenig's isthmus in study of [Klotz] (55) 61
  - lung larynx in 100 fatal cases of [Fetterolf] (85) 691
  - lung miliary in senile period [Rawlings] (102) 223
  - lung mobilization of lung in early stages [Kuhn] (109) 1281
  - lung new cavity sign in [Wittich] *652
  - lung operations on thorax for [Löwenhjelm] (146) 156

von Hoffman Charles A., 1645
von Muralt L 1420
von Schmittholz, E R Max Magnus, 1055
von Werder, Arthur, 1138
von Zehnder, Prof , 472, 924
Waddell, James H 1570
Wadsworth John Emil, 562
Wakefield S R , 477
Wainwright, James Bedle, 1570
Waite, Herschel N 1427
Walden, Charles H , 1200
Walker, Bernard H , 301
Walker, David, 1770
Walker, Edward Field, 794
Walker, Eugene McIntire 387
Walker, George S 1200
Walker, John C , 1771
Walker John Taylor 863
Wall, William R Jr , 926
Wallace, Gilbert Edward, 1931
Walser, William Charles 1862
Walsh, James Joseph 49
Warren, Alvah A 1771
Warren, James T , 301
Warren, Joseph Weatherhead 211
Warriner, Harry Blair 212
Wass Anne Taylor 1056
Waters, James K. 563
Watson, Harriet Noble 1646
Watson, Joseph C 1771
Way, John Wesley 1200
Weaver LeRoy F 926
Webb Charles Valores, 563
Webb DeWitt 1426
Webster, Albert T , 387
Webster, Elery Channing, 49
Webster, Lenore Perky, 1646
Weeks, Albert 212
We dman, Peter S 301
Welander Edvard Wilhelm, 1136
Welch, Benjamin F 926
Welch Thomas G 563
Welch, William Blackwell, 993
Wells, Isaac Jones, 477
Wells, Louis N , 1645
West, George T , 301
West, Joseph G 728
st Samuel, 563
el, John H , 1569
, George, 1056
er Charles M , 563
ler, Claude Lamont, 49
itaker, Lyman Little, 1426
White Gordon, 563
White, Harvey A., 1200
White, John Lysander 1277
White, Moses James 993
White, Raleigh R , 925
White, Robert Marshall, 728
White, Whitman Vassel, 726
White William H 134
Whitney, Willard Adolphus, 1200
Whitney William E 211
Whitty, Lieut -Col M J 1642
Wilhelm, Frederick 1931
Wilkerson, James Henry, 563
Wilkes, Farrington 563
Wilkinson, Clement P 562
Wilkinson Walter W , 1199
Will Frederick James, 993
Williams, Charles Boyd 2000
Williams Edwin McLaren 1426
Williams, Frank G 1427
Williams, John H 301
Williams, John J , 1495
Williams, Marcus Jay, 1200
Williams Richard Paul 1277
Williamson Harry F 727
Williford Henry Lee 993
Willis, Henry A 1645
Wilson, Claude Lucas 1646
Wilson, Frank Carothers 1137
Wilson, Henry M , 926
Wilson, Jeremiah, 1645
Wilson, John Buchanan, 1427
Wilson N E , 794
Wilson, William Dean, 1336
Wilson, W D 1277
Winder William G , 1138
Winn Chester Arthur, 926
Winslow, William Henry, 1276
Winter, James A 2000
Winterbotham William H , 476
Winternitz, W , 1334
Winters John Adams 301
Wirtz Louis Joseph 926
Withington, Charles Francis, 300
Wittenmyer, James Graham, 134
Whittleton, Ellera J , 212
Wood, George Glen, 863
Wood, Thomas A , 2000
Wright, Hamilton, 211
Wright, Samuel Vail, 728
Wyatt, Charles N 134
Yancey William Benjamin, 387
Yandell, William W , 1496
Yates, Octavius King, 1200
York, William Blackburn, 387
Young, Frank E , 795
Young, Junius D , 1862
Young, William A , 476
Young, Z. N , 563
Younglove, John E , 563
Zimmerman, Joseph D , 1200

E

EAR See also Special Structures of Ear
EAR complications in aviators during flights, 647
  discharging, elimination of diphtheria bacilli in, 568
  diseases and war, 48
  diseases treatment by the nonspecialist [Got] (11) 69
  diseases, welfare work for school children with, [Laubi] (41) 316
  effects of high explosives on 1182—E [Wilson] (1) 1291, (8) 1784
  gastric symptoms due to irritation in external, [Goldsmith] *828
  internal, experimental and histologic study of shell shock of, [Prenant & Castex] (30) 1439
  internal, practical use of recent work on, [Jones] *829
  internal with inherited syphilis, [Mahler] (85) 1221
  middle acute troubles, [Dotson] (125) 809
  middle, chronic suppuration of, prevention of [Mackenzie] *8
  middle proteus infection of, [Wada] (78) 1442
  vaccines in diseases of, [Coates] *162
ECHINOCOCCOSIS [Llambias] (123) 410
  at Massachusetts General Hospital, 29 cases [Davis & Baboni] (36) 1873
  complement fixation test in diagnosis of, 16 cases, [Gallart-Monés] (36) 1008
  of bone, [Walker & Cummins] *839
  of liver, [Dévé] (67) 1513
  of lung primary operative treatment of [Mariotti] (50) 1513
ECLAMPSIA conservative treatment of [McPherson] (36) 659
  nasal obstruction with renal insufficiency in 931
  rare on war diet in Germany 732
  without convulsions or loss of consciousness [Chatillon] (75) 1587
ECZEMA chronic treatment of two modern methods [White] *81
  in children [Comby] (5) 663
  nitrogen metabolism of 2 cases [Schamberg & Raiziss] (71) 1212
  of external origin its relation to dermatitis [Knowles] *79
  pathology and pathogenesis of dematitis and, [Heimann] *75
EDEMA hard, treatment of, [Nagy] (76) 586
  of mouth pharynx, tongue and epiglottis due to eating Brazil nut [Dabney] *1476
  parallel study of blood pressure urine and edema in pregnancy [Rosensohn] (39) 659
EDUCATION See also Schools, University
EDUCATION, medical, [Roberts] 392
  medical and General Medical Board, 1267
  medical, correlation of laboratory and clinical teaching [Dock] (100) 1005
  medical defects in enforcing preliminary requirements in English, [Morris] 1937—ME
  medical, in Chicago 208
  medical problem of higher degrees in [Arnold] 573—ab
  medical, progress of year in [Colwell] 573—ab
  medical selection of professors for medical department of universities [Van Rijnberk] (90) 716
  no changes in medical teaching on account of war, 1329
  preliminary and medical, economy of time in [Claxton] 574—ab, [Bevan] 574—ab
EGGS and the hen, 378—E
  Chinese preserved, [Blunt & Wang] (58) 66
  preservation in water glass, 1865
EHRLICH and von Behring, 1045—E
ELBOW joints infected gunshot injuries of shoulder and treatment of, [Swan] (7) 1438
ELECTRIC light, incandescent, in experimental arthritis, [Simmonds & Moore] (33) 399
ELECTRICITY See also Electrotherapeutics
ELECTROCARDIOGRAM in diagnosis of cardiac valvular disease, [Pardee] *1250
  T peak in, [Gerhartz] (80) 232
  ventricular complex of relation of changes in form of, to functional changes in heart, [Robinson] (7) 64
ELECTROMAGNET removal of foreign bodies from globe by, [Calhoun] (56) 1211
ELECTROTHERAPEUTICS, facts and fallacies concerning, [Clark] (110) 1146
ELECTROZONE 135—P
ELEPHANTIASIS nostras report of case, [Elliot] (74) 488
ELGIN National Watch Company settles typhoid claims, 383
ELMORE'S R'eumatine Goutaline, 565—P
EMBALMING improved technic for, [Delfino] (116) 946
EMBOLISM fat cause of shock, [Porter] (67) 736
  fat occurrence and spread of, [Katase] (55) 1949
  hemiplegia caused by, following gunshot wounds of carotid arteries 4 cases of, [Colledge & Dunn] (24) 582
EMETIN action of hydrastin hydrastinin cotarnin emetin and some pyridin derivatives on ureter, [Macht] (84) 1212
  behavior of entameba histolytica in presence of [Schiess & Swellengrebel] (97) 885
  bismuth iodid, experiences with, in amebic dysentery, amebic hepatitis and general amebiasis, [Low] (38) 1348
  bismuthous iodid, ameba histolytica carriers treated with, [Imrie & Roche] (34) 491
  hydrochlorid, toxic effect of [Johnson & Murphy] (111) 313 [Dalimier] (47) 741
  in dysentery, 374—E
  in subacute or chronic follicular enterocolitis, [Azcoitia] (38) 740
EMPLOYEE, basis for injured person to recover for medical treatment and medicine 396—Ml
  erysipelas after frostbite deemed personal injury to, 485—Ml
  factory medical supervision of, [Clark] *5
  street railway medical supervision of [Lemon] *95
EMPLOYERS duty of, to furnish first aid as well as surgical assistance 1344—Ml
EMPYEMA continuous drainage for new method of, [Phillips] (88) 580
  obscure case of [Peskind] (17) 577
  of chest occlusive drainage for, demonstration of operation and instruments, [Rosenthal] (29) 1507
  roentgen examination in differential diagnosis between pneumonia and, in children, [Stewart] (22) 311
  suction drainage in, [McGlannan] (159) 738
  treatment of following firearm wounds of thorax 1567
ENDAMEBA cysts [Knowles & Cole] (30) 1666
  histolytica behavior of under emetin [Schiess & Swellengrebel] (97) 885
  histolytica, treatment of carriers with oil of chenopodium, [Walker & Emrich] *1456
ENDERMIC reactions [Sollmann & Pilcher] (86) 1212
ENDOCARDITIS acute among soldiers at the front 299
  acute incipient of tonsillar origin immediate tonsillectomy in, [Fleischner] [19) 937
  streptococcus subacute bacteriologic studies in, [Kinsella] (25) 1063
ENDOCRINE Glands See Secretion, Internal Glands of
ENDOCRINOLOGY, new journal of, 557
ENDOTHELIOMA of right bronchus removed by peroral bronchoscopy [Jackson] (10) 936
ENDOTHELIUM vascular experimental studies on origin of and of erythrocytes, [Reagan,] (3) 398
ENGLISH preliminary requirements in defects in enforcing [Morris] 1937—ME
ENTEROCELE case of strangulated right femoral intraperitoneal cystocele with, [Saliba] *1237
ENTEROCOLITIS follicular emetin in [Azcoitia] (38) 740
ENTEROPTOSIS See Gastroptosis
ENTEROSPASM case of in which portion of intestine involved was of unusual extent, [Whiteford] (8) 1347
ENTEROSTOMY perfected technic, [Long] *833, 1052
ENURESIS See Urine, Incontinence of
ENZYMES, proteolytic of stomach, [Hammarsten] (94) 746
EOSINOPHIL blood cells, nature and functions of, [Marchesini] (88) 1011
EOSINOPHILIA after vaccination against typhoid, [Labor] (98) 233
  anaphylaxis and nervous system, [Klinkert] (95) 1152
  intestinal report of case [Barnett] (23) 1780
  true significance of in mild anemias of schoolchildren, [Scaroni] (93) 945
EPIDEMICS in Sonora, 46
EPIDIDYMITIS, tuberculous, iodin in [Sofia] (76) 884
EPIDIDYMOTOMY, [Plaggemeyer] (76) 1945
EPIGLOTTIS, edema of mouth, pharynx tongue and due to eating Brazil nut [Dabney] *1476
EPILEPSY clinical studies in, [Clark] (120) 1214
  criminal epileptic with consideration of epilepsy as medicolegal problem [Yawger] (91) 1005
  etiology of, and Dr C A. L. Reed, [Thom] 1139—C
  from nicotin poisoning, [Tedeschi] (93) 1352
  Jacksonian unusual features of, [Leopold & Auer] (79) 1212
  of intestinal origin, bacteriologic phase of, [Reed] 652—C
  reflex from contusion of kidney, 125—ab
EPINEPHRIN and factors affecting time of coagulation of blood [Grabfield] (20) 146
  content of blood in conditions of low blood pressure and shock, [Bedford] (12) 1779
  differential action of [Hartman & McPhedran] (18) 1780
  effects of, on distribution of blood 200—E [Hoskins & Gunning] (16 17) 1780, (3 4) 2006
  Ercolani's suprarenal treatment in nephritis, 1934
  hyperglycemia influence of intravenous injection of sodium carbonate on glycosuria and, [McDanell & Underhill] (53) 1064
  in iodin poisoning, [Milian] (46) 1949
  influence of, on leukocyte blood picture in man, [Castren] (65) 2012
  microscopic test for and Henle's reaction of chromaffin cells in suprarenals, [Ogata & Ogata] (44) 1943
  producing system, sudden death from insufficiency of [Steiger] (73) 1587
EPITHELIAL cells and saprophytes in sputum significance of, [Otani] (43) 578
EPITHELIOMA developing in pellagrous dermatitis, [Lynch] (49) 1781
  pathogenesis of [Yamagiwa & Ichikawa] (101) 1589
  primary of humerus, [Giannettasio] (62) 1219
ERCOLANI'S suprarenal treatment in nephritis 1934
ERUPTIONS, induced in soldiers, 1568
ERYSIPELAS after frostbite deemed personal injury to employee 485—Ml
  iodin in [Keppler] (41) 812
ERYTHEMA of scrotum with pellagra as initial skin manifestation [Crosby] *1403
ERYTHROCYTES See Blood Corpuscles Red
ERYTHRODERMIA seborrheic desquamating [Bordot & D Ovidio] (70) 1951
ESOPHAGOSCOPIC foreign body extraction mechanical problems of [Jackson] *245
ESOPHAGUS cancer of cardia and, [Sarmento] (49) 52
  foreign bodies in air passages and [Schlittler] (49 53) 1218
  stricture [South] *1255
  ulcer of [Christopherson] (14) 1215
ESSENCE Mentho Laxene 1863—P
ETHER discovery of 1903—ab
  effect on of exposure to air 305
  pneumonia so called and pelvic and abdominal surgery, [Darnall] (13) 874

TUBERCULOSIS, lung plea for more thorough examination, [Miller] (83) 223
lung pneumosan in, [Carver] (25) 226
lung primary melanotic sarcoma simulating [Kunkel] (108) 1583
lung prognosis of, [Taillens] (41) 312
lung radiotherapy in [Baemeister] (83) 928
lung, recurrent hilus infiltration in children [Wessler] (3) 917
lung, rest of lung by posture in, [Webb] (23) 1820
lung, roentgenography of [Matson] (150) 224 [Dunham] 1164—ab (3) 1492 [Bissell] (4) 1492
lung roentgenotherapy of experimental bases for [Küpferle] (82) 928
lung segregation and institutional treatment of [Holmboe] (110) 1281
lung serodiagnosis in 280—E
lung sterilization of women with, [Olivier] (43) 312
lung symptoms and physical signs in [Pottenger] *84
lung thorax in study of [Virchow] (71) 609
lung toxemia of quinin and urea bichlorid in [Cohen] (99) 841
lung trauma in [Orth] (125) 611
lung treatment of [Mayer] (67) 464 [Watson] (146) 1746
lung tuberculin in diagnosis of [Clovis] (149) 606
lung 200 cases [Lamont] (81) 223
lung types wherein only Much granules occur in sputum [Matson] (99) 308
lung urochromogen reaction as aid to prognosis in [Burgess] *82 [Cowen] *791
lung urochromogen reaction in [Biesenthal] (59) 147
medical and surgical treatment of, [Morris] (65) 1822
medical college training in, [Emerson] (58) 147
miliary acute showing blood picture of acute myelogenous leukemia [Marshall] (36) 59
miliary positive typhoid bacilli cultures and Widal reaction in [Blassberg] (62) 389
miliary with chronic benign course [von Muralt] (78) 1876
milk of immunized cows in 811—ab
otitis media and, [Phillips] (21) 1351
oxygen in lesions due to [Cendron] (38) 538
pharynx and larynx primary in male 69 years old, [Horgan] (11) 693
placenta miliary with latent tuberculosis of mother 2 cases, [Weller] (44) 1428
polymorphous erythema sign of, [Nicola] (128) 612
potassium ferrocyanid test in [Holm] (74) 1582
precipitin reaction in tuberculous fluids, [Glovne] (24) 1661
pregnancy and [Farani] (119) 317
pregnancy and activation of otherwise latent [Meyer] (58) 844
prevention and cure is present knowledge sufficient for [Masters] (23) 1272
prevention and health insurance [Andrews] (85) 921
prevention from patient's standpoint [Teague] (60) 147
prevention from physician s standpoint [Lamont] (61) 147
problem duties of physician in southwest toward [Edson] (100) 308
problem social aspects of in Arizona [Williams] (64) 1429
prophylaxis of, [Barbosa] (90) 1665
prophylaxis of during war [Rénon] (28) 694
prophylaxis of official directions for [Henkel] (87) 1589
prostrate roentgenoscopy of prostatic stones and [Reichmann] (111) 1354
protective ferments in, [Datta] (83) 1664
purpura hemorrhagica in, 3 cases [Bauch] (24) 1056
rest in treatment of, [Morse] (103) 62
retina, recurring hemorrhage and retinitis proliferans [Jackson] (90) 918
TUBERCULOSIS, roentgenoscopy of [Grenet] (31) 694
sanatoriums for soldiers with, [Jolly] (15) 1432
secondary infections in, control of, [White] (14) 606
seminal duct [Plaggemeyer] (88) 1167
serodiagnosis in 35—E
soldiers with 289 905 1038 1320
soldiers with, aid for 46 670 1561
soldiers with health resort for, 1039
soldiers with sanatoriums for, [Labbé] (30) 694 829
soldiers with systematic care for and training in hygiene of, [de Fleury] (44) 1171
Spine See also Pott s Disease
spine, treatment of, [Thomas] (53) 147
standardization committee appointed 367
stigmata of, [Holeman] (113) 148
suprarenal bone and bone marrow formation with [Woolley] (70) 1582
surgical of abdominal cavity [Funk] (41) 306
surgical Sea Breeze Hospital for review of 10 years' work at [Whitbeck] (6) 1055
surgical skin tuberculin test in, [Zitronblatt] (126) 850
teachers examined for 137—ab
tongue [Durante] (35) 689
treatment of [Homan] (29) 306
Tuberculin in See Tuberculin
typhoid followed by and typhoid in tuberculous, [Bernard] (29) 694
uterus cervix, early, [Cullen] (108) 1059
vertebral paralysis from [Jorge] (39) 2044
vertebral treatment of, [Jorge] (44) 2129
Villeman s experimental demonstration of specific and contagious virulence of 50th anniversary of [Landouzy] (36) 312 (17) 386
war and [Landouzy] (27) 694 [Cötzl] (111) 848
TUMOR abdomen cystic 3 cases [Hoyt] (90) 1167
autolysin in mouse [Wood] *94
bladder, [McVicker] (53) 2040
bladder, cauterization and fulguration of [Kelly] *721
bladder, high frequency destruction treatment of [Uhle] (71) 1493
bladder in children [O Neil] (54) 61
bone circumscribed nutritional disturbance in long bones simulating [Bérard] (45) 538
bone giant-cell medullary, [Haussling] (58) 1429
brain diagnosis of, [Climenko] (102) 773
brain epilepsy due to operative treatment of, [Kocher] (78) 927 (60) 990
brain hemangio endothelioma decompression, removal of tumor cure [Burns] (119) 1431
brain in infant case of, [Marion] (111) 1583
brain large, removal of, [Csiky] (91) 928
brain simulating eclampsia, [Alin] (145) 156
breast [McGhee] 1348—ab
carotid and aneurysm of internal carotid, case reports [Shipley] *1602
carotid report of case, [Russell] (108) 224
cells destruction of, [Iwasaki] (11) 225
cerebellopontile, tic spasmodique produced by, [Cushing] 1886—ab
cerebellum localization of, [Grey] (33) 689
cerebellum localization of, pointing reaction and caloric test, [Grey] (6) 1743
chemotherapeutic experiments on, in rat [Weil] (73) 691
classification of, [Moulin] (23) 984
classification of new (histogenetic) clinical value of [MacCarty] (2) 2125
colon malignant, [Morton] (10) 1355
craniopharyngeal duct [Jackson] *1082
dermoid of mouth case report [Gilman] (83) 2040
TUMOR diagnosis free as function of state public health laboratories [Bristol] *1678
effect of phloridzin on in animals [Wood] (70) 691 [Benedict] (44) 1658
gallbladder malignant, [Else] (113) 841
growth immune reactions against in animals with spontaneous tumors [Fleisher] (62) 1273
hypopharynx obstructing larynx, [Fraser] (13) 537
hypophysis cerebri roentgenotherapy of, [Williams] (133) 1275
immunity, [Tyzzer] (38) 1658
internal secretion and spontaneous development of [Lathrop] (68) 691
irritation as factor in development of malignant, [Rohdenburg] (117) 536
kidney in rabbit [Bell] (39) 1658
kidney malignant [Willan] (7) 64
lachrymal gland report of case with operation, [Washburn] (155) 149
larynx intrinsic malignant partial resection for [Lack] (14) 1824
leukocyte changes in cases of malignant [Gruner] (10) 986
lung metastatic, roentgenography of case reports [Moore] (2) 1492
lymph nodes primary including Hodgkin s disease [Coley] (33) 382
malignant faulty treatment of cases illustrating, [Hazen] *1829
malignant general predisposition to growth of, [Korenchefsky] (55) 1434
malignant heterologous immunity to of mouse and rat serologic investigation of, [Tsurumi] (20) 1584
malignant ulceration of skin in treatment of, [Tugendreich] (39) 1357
mediastinum acromegaly with case of [Inglis] (52) 1166
multiple [Harbitz] (136) 994
optic nerve primary, removed with preservation of eyeball by Kroenlein method [Knapp] (43) 60
ovary malignant [Porter] *806
ovary obstructing labor, [Lindqvist] (144) 156
ovary prognosis of, [Landau] (67) 609
ovary thyroid tissue in [Platou] (66) 1498
palate [Morone] (114) 316 (120) 543
pancreas primary removal of 5th successful operation on record, [Serafini] (118) 543
pontocerebellar diagnostic elements of [Gordon] (11) 1490
pregnancy and pelvic [Branson] (55) 383
retroperitoneal cystic origin of [Hadley] (117) 604
roentgenotherapy in malignant, [Holding] (12) 1743
simultaneous occurrence of several independent [Harbitz] (118) 698
skin anatomic distribution of [Van Beuren] *111
spinal cord compression by clinical anatomic study of, [Claussade] (32) 923
spleen, chronic cryptogenetic, classification and treatment of, by splenectomy [Sanders] (47) 533
stomach primary benign report of cases, [Basch] (115) 604
tendon sheaths report of cases, [Beekman] (22) 59
testicle malignant cases of, [Willard] (22) 1579
thymus report of 3 cases of lymphosarcoma [Ewing] (106) 1354
thyroid in sea bass, [Marsh] (41) 1658
thyoid of bones [Kanoky] (85) 2040
torula infection and cerebral pseudotumor 743—E
transplantable inheritance of susceptibility to [Little] (56) 603
transplanted of animals and radium [Wood] (25) 59
tuberculous in cervical spinal cord [Veraguth] (73) 1587
vertebrae operation for, [Key] (142) 156
TURBINATE galvano cautery operation for lower, [Sluder] (80) 1274
inferior [Cavanaugh] (23) 532
removal of posterior tip followed by hemorrhage [Hays] (79) 921
TURBINECTOMY, results of [Hartt] (136) 1746
TURKISH army prophylaxis against epidemic diseases [Hoover] 832—C
government welcomes help 1210
wounded gas gangrene among in Constantinople [Hoover] 832—C
TURNER Sir William, death of 970
TWILIGHT Sleep See Scopolamin Morphin Anesthesia in Labor
TWINS amaurotic family idiocy in one of [Herrman] (36) 532
congenital syphilis simulating mongolism in one of [Van der Bogert] (9) 219
TYPHOID, [Speer] (83) 459, [Merryday] (27) 1272 1295—ab
abdomen acute complications of [Remsen] *28
among Belgian refugees in Holland [Cammaert] (121) 1362
and paratyphoid, analogy between, [Fraenkel] (74) 1359
aphasia in, in children [Laureati] (95) 1751
Bacillus See Bacillus Typhosus
bacteriologic diagnosis of [Schurmann] (69) 313
camp prophylaxis of by disinfection of hands, [Joetten] (68) 777
carriers [Dudley] (25) 1824
carriers examination of urine and feces of report on elaterin catharsis [Tonney] (66) 920
carriers infection from [Bijl] (132) 930
carriers search for, [Stokes] (30) 1277
carriers ultraviolet rays for, [Hufnagel] (68) 1279
cholecystitis acute suppurative complicating [Price] (64) 307
circulatory disturbances during convalescence [Groedel] (43) 388
colloidal gold in, [Labbé] (42) 1277
colloidal iron in, [de Arric] (39) 1894
conditions not rendering city liable for 213—Ml
curbing of, [Marlow] 665
death from after injury 301—Ml
death rate in California, [Sawyer] (33) 1165
diagnosis in, difficult [Jenkin] (67) 691
diazo and urobilinogen reactions in urine in [Pick] (97) 610
differential diagnosis of [Saunders] (105) 232, [Habetin] (102) 848
diphtheria associated with 14 cases [Labbé] (34) 923
emetin hydrochlorid as abortive in, [Busbee] (161) 310
esophageal ulceration and stricture following [Moorhead] (69) 307
ether in bacteriologic diagnosis of paratyphoid and [Hall] (124) 317, 466
feces disinfecting inadequacy of ordinary methods [Green] (130) 1168
feces isolation of pathogenic organisms from importance of method in, [Browning] (4) 2041
feces method of preserving for delayed examination and isolation of typhoid bacilli from feces [Teague] (41) 2039
feces nitrogen content of [Mercier] (28) 1061
flies and carriers as sources of, at Rio [Gomes] (93) 1665
gallbladder necrosis after [Orth] (72) 777
hearing disturbance in, [Rhese] (53) 228
immunity cutaneous test of quantitative studies of, [Kilgore] (14) 455
in Cleveland in 1914 [Cox] (35) 603
in Detroit [Vaughan] (55) 1273
in large cities of U S in 1915 *1305 1468—E
in soldiers [Scholz] (58) 313
in Toledo [Mundy] (138) 309
in tuberculous and tuberculosis following typhoid [Bernard] (29) 694

FRACTURES, new method of applying autogenous intramedullary bone transplants and of making autogenous bone screws, [Hoglund] (90) 580
of long bones, primary suture of, [Bonnet] (40) 1877
open treatment of, of long bones, [Grant] 221—ab
os calcis, mechanics of, [Magnuson] *530
spine, treatment of, [Sharpe] (8) 222
thigh, appliance for ambulatory treatment, [Page] (13) 1067
treatment new methods of precision in, [Hawley] *455
treatment of deformed union and nonunion of, [Roberts] (89) 1005
treatment, suspension in, [Cattier] (15) 69
FRAMINGHAM experiment, an organized effort at community control of disease, 999—ME
FRANCE, improvement in organization of military surgical service, 558
FRANCIS JOSEPH, emperor of Austria death of 861
FRANCO-RUSSIAN medical committee, formation of, 384
FRANK'S subcutaneous symphysectomy, [Burckhardt] (34) 881
FREEMAN'S Balsam of Fir Wafers, 565—P
FREEZING See also Frost-Bite
FREEZING, vasomotor system in injury from importance of, [Neri] (85) 1072
FRENCH pharmaceuticals, [Lyonnet] (45) 1786
FRIEDREICH'S DISEASE, [Litchfield, Latham & Campbell] (22) 1215
FROST-BITE See also Freezing
ROST-BITE, erysipelas after, eemed personal injury to emee, 485—Ml
LA 1341
infection, superficial, [do galhaes] (112) 157
NCLE, treatment for solitary, [Bartlett] *1904
FURUNCULOSIS sterilization treatment of, [Bowen] (52) 400

G

GALEGA, alleged galactagogue action of 1570—P
GALLBLADDER calculus, cholecystitis with and without, [Hendon] 222—ab
calculus in Peru, [Wieland] (84) 1151
calculus, obstruction and retention main factor in destructive processes, [Sprengel] (56) 943
calculus recurrence of, [Deaver] 222—ab
calculus, removal of breach of contract for, 142—Ml
carriers, alkaline treatment with detection by aid of duodenal tube, [Nichols] *958
Disease See also Bile Tract
disease diagnosis of [Cheney] (7) 1579
disease, cholecystectomy in, [Fowler] (9) 1579
diseases genesis of, speculations on 1912—E
disturbance of law of contrary innervation as pathogenic factor in disease of bile ducts and [Meltzer] (6) 1579
effect of opium alkaloids on, [Macht] (65) 1944
effect of removal of, [Judd & Mann] (111) 1437
ALL DUCTS See Bile-Ducts
LLSTONES See Gallbladder Calculus
LVANOPALPATION of abdomen, [Kahane] (108) 409
NGRENE extensive peripheral, in syphilitic man of 37, [Schou] (112) 1672
gas and bacillus welchii, [Simonds] (45) 1943
gas, bacillus welchii infection and intoxication, [Bull & Pritchett] *1815
gas diagnosis of, [Biermann] (91) 155
gas pathology and bacteriology of, [Taylor] (23) 1007
gas sugar exalts virulence of germ of, [Bogomoletz] (102) 1073
impending, localized muscular rigidity as sign of, [Flévez] (28) 1511
in wounded, [Tansini] (60) 1950
necessity for keeping venous blood in limb to prevent, after ligation of artery, [Sehrt] (38) 666
GANGRENE of uterus abortive, [Mauclaire] (26) 228
puerperal, of leg, case of, [Knipe] (6) 1942
GAS cysts of intestine, [Schnyder] (56) 1295
devices used in combating gases in trench warfare, 1562
Gangrene See Gangrene, Gas
poisoning, blood change in, [Miller] (19) 2009
poisoning, punctiform hemorrhages of brain in [Mott] (8) 1946
producing bacilli hemothorax infected by, [Elliott & Henry] (2) 1438
GASTRECTASIS See Stomach, Dilatation of
GASTRECTOMY and pylorus exclusion influence of, on effects of pancreatectomy, [Murlin & Sweet] (71) 66
GASTRIC JUICE See Stomach Secretion
GASTRITIS See also Dyspepsia
GASTRITIS, chronic special type of roentgen shadow with, [Schwarz] (107) 409
phlegmonous, [Lehnhoff] *966
GASTRO-ENTERITIS for which uremia is responsible, [Lesieur] (44) 942
GASTRO-ENTEROSTOMY, complications of, [Widere] (111) 1074, [Tandberg] (91) 1443
duodenal alimentation in severe dyspepsia after, [Einhorn] 1776—ab
mechanics of stomach after [Jacobson & Murphy] (15) 398
spasm closing, [Urrutia] (50) 152
technic for and exclusion of pylorus in duodenal ulcer, [Pauchet] (56) 1009
GASTRO-INTESTINAL anastomoses, healing of [Flint] (42) 735
disease, after treatment of patients operated on for [Goodman & Speese] (116) 1875
disease and fitness for military service [Schüller] (81) 408
disease and renal insufficiency in soldiers on active service, [Mattei] (34) 1440
disease in children treatment of, [Göppert] (73) 744
hemorrhage in newborn treatment of, [Triolet] (42) 1008
sequels of dysentery and paratyphoid [Carles & Froussard] (35) 1008
tract polypous adenomas in, [Ingebrigtsen] (125) 234
GASTROPEXY and gastroptosis, [Bircher] (43) 1512
GASTROPTOSIS and gastropexy, [Bircher] (43) 1512
GENERAL MEDICAL BOARD, 1128, 1188 1267
new members of 1330
GENITAL organs tuberculosis of transmitted from husband to wife, case of, [Sheill] (5) 2009
prolapse, [Piccardo] (83) 884
GEORGIA medical news 41, 719, 1132 1271, 1417, 1563
state board October report, 139
GERHARDT, centennial of father of anatomic notation, 472
GERMAN army experience, points from, 1191
GERMANY no importation of patent medicines into 130
universal patriotic service in 297
GERMICIDE, new and superior mercurial [Schamberg, Kolmer & Raiziss] *1458
GERSUNY, homage to, 472
GILLIAM operation, modified and its ultimate results, [Goldspohn] (8) 398
GINGIVITIS, interstitial bacterial findings and relationship to pyorrhea alveolaris [Lescohier] *414 [Medalia] 798—C
interstitial differential diagnosis of predisposing causes in pyorrhea alveolaris or, [Rhein] *417
interstitial etiology and treatment of [Talbot] *420
peridental, relation of, to Vincent's angina, [Taylor & McKinstry] (13) 1347
GLAND index in tuberculosis, [Lankester] (13) 404
GLANDS, Ductless See Ductless Glands
GLAUCOMA, bilateral congenital case of, [McDonald & Smith] (38) 659
corneal cyst with secondary, [Hagen] (124) 234
GLAUCOMA reduction of intraocular tension by timed intravenous glucose injections, [Sansum] *1885
subconjunctival injections of sodium citrate in, [Grönholm] (90) 319
GLOMERULONEPHRITIS, production of, in rabbit by intravenous injections of diphtheria toxin [Bailey] (44) 224
GLOSSINA mortisans and trypanosomes [Tiechmann] (58) 230
GLOSSOPHARYNGEAL paralysis sign of, [Vernet] (45) 405
GLUCOSE and water concentration of blood, relation between, [Hiller & Mosenthal] (64) 66
Bertrand's modification of Fehling's solution 1281
intravenous injections timed, in glaucoma [Sansum] *1885
GLYCEROPHOSPHATE Compound Ampuls Squibb, 388—P
GLYCOGEN content of liver relation of diet to, [McDanell & Underhill] (54) 1064
GLYCOSURIA, experimental, [Macleod & Fulk] (15) 486
influence of intravenous injections of sodium carbonate on epinephrin hyperglycemia and [Mc Danell & Underhill] (53) 1064
GLYCURONURIA with disease of liver, [Roger] (48) 152
GOFF'S Cough Syrup 135—P
Herb Bitters, 135—P
GOGGLES, iron for soldiers on firing line, [Di Guiseppe] (82) 1351
GOITER See also Hyperthyroidism, Thyroid
GOITER, autonomic nervous system in, histopathology of [Wilson & Young] (64) 807, [Wilson] (76) 1874
classification of, [Lanz] (96) 1515
exophthalmic new ocular muscle symptoms in, [Suker] *1255
exophthalmic roentgenotherapy of hyperthyroidism and, [Simpson] (118) 1146
exophthalmic traumatic [Lenier] (49) 229
in Netherlands, [Kappenburg] (121) 587
incidence of, among 425 women at Newberry State Hospital, [Kemp] (75) 1945
metabolism study of, [Halverson Bergeim & Hawk] (6) 64
quartz mercury vapor lamp for [Haslebacher] (54) 1218
suppuration in, [Luz] (58) 1441
sympathetic system in pathologic changes in, [Wilson] (2) 222
GOLGI reaches age limit, 1274
GONOCOCCUS infection pathogenesis of [Roucavrol] (24) 881
physicochemistry of, [Warden] *432
whey medium for, [Watabiki] (25) 1007
GONORRHEA in male at Rio [Pereira] (79) 74
occlusion of urethra in treatment of [Dasso] (87) 74
rectal in children, [Stümpke] (75) 586
treatment by injection of killed gonococci meningococci and colon bacilli [Culver] *362
vulvovaginitis in little girls heat in treatment of [Ylppö] (75) 744
Wright's solution and argyrol in, [Dragoo] (102) 1290
GOOCH S Mexican Syrup of Wild Cherry Etc. 1864—P
GOODMAN S autoserum treatment of chorea, [Faber] (36) 311
GOODWIN Colonel and medical officer on active service 1557—E
GOUT and gumma involving upper vertebrae [Hnatek] (78) 407
diagnosis and clinical characteristics of, [Pratt] (22) 223
elimination of uric acid in, [Pratt & McClure] 1871—ab
massage and exercise in treatment of, [Kirchberg] (66) 743
metabolism in [Bain] (44) 1348
nature of, [Bass & Herzberg] 571—ab
GOVERNMENT sends scientific commission abroad, 1190
services opportunity for young men in 1048—E
GRADWOHL and Hecht complement fixation reaction in syphilis with reference to cholesterinized antigens [Kolmer] (65) 312
and Hecht-Weinberg test in diagnosis of syphilis [Gradwohl] *514
GRAFTS, cartilage from calf [Imbert Lheureux & Rouslacroix] (67) 1010
GRAFTS, homoplastic skin, histologic study of 2 cases [Cotte & Du pasquier] (56) 1149
of normal tissue between blood relations, [Schöne] (65) 1587
Siamese pedunculated grafting operations from donor to recipient, [Laurent] (43) 1585
GRAIN, cereal, anaphylactic action of, on respiratory tract, [Turnbull] (23) 223
GRANULOMA, ulcerating, intravenous injection of tartrate of antimony and potassium in [da Matta] (118) 410
GRAVES' DISEASE See Goiter, Exophthalmic
GRAYSON again nominated medical director, 859
appointment of confirmed, 922
now rear admiral, 296
GRENADA, medical practice in 646
GROUP study, [Behlow] *360
GROWTH delayed compensatory processes in, 982—E
during school years significance of variability in 982—E
laws regulating nutrition and in man [Riebesell] (59) 584
of cells, studies on [Burrows, Burns & Suzuki] (56) 877
of population and food supply, 555—E
GUMMA and gout involving upper vertebrae [Hnatek] (78) 407
GYNECOLOGY at Christiania, [Brandt] (134) 947
phototherapy in [Klein] (41) 666
roentgenotherapy in, [Keene] (87) 1508
syphilitic infection in, [Bovée] (115) 68

H

H G C Injection, 566—P
HABIT-FORMING DRUGS See Drugs, Habit-Formning Harrison Law, and also under names of drugs
HAGEN-BERGER, Godfried Leonhard, practicing without license 1135
HAIR congenital absence of with atrophic condition of skin and appendages in boy of 5, [Schippers] (91) 815
falling of, as sign of latent tetany, [Bolton] (133) 947
plant as pseudoparasites, [Donaldson & McLean] (26) 405
HALLUX VALGUS, origin of, [Milo] (122) 157
HAND artificial in practice of medicine [Cohn] (62) 943
Dupuytren s contraction of palmar fascia, [Hutchinson] (28) 1007
severance of not within terms of accident policy 1654—Ml
training left hand in writing, 1562
unusual deformity of, [Griffiths] (29) 942
HARRISON LAW orders for drugs for patients in hospitals need not bear registry number of physician, 1280
ruling internal revenue department revokes, 1273
HARVARD base hospital unit in action, 1920
Cancer Commission, report of, 981—ab
Infantile Paralysis Commission 1916 report [Peabody] (42) 1581
HARVEY Laboratory for research in blood pressure, [Pepper] 1339—C
HAWAII January report 1342
practice in requirements to, 215
September report, 56
HAY FEVER Remedy Sterline s 1932—P
specific treatment [Cooke Flood & Coca] (53) 875
HEAD rest new cerebellar, [Sharpe] *707
HEADACHE, puncture [Dana] *1017
syphilitic ophthalmoplegic, [Foulard] (61) 1010
HEALTH administration 395—ab
administration for small communities 714—E
and athletics [Forsythe] 995—C
boards of rational constitution of [Gualdi] (98) 945
car and moving picture 174—ab
department employees periodic examination of 2004—ME
dividends, [Trask] 704—ab
education on disease 130
examination at school entrance [Burnham] *893
facilities of state to be offered to federal government 1329
faddist 732—ME
legislation opposed, 795—P
magazine, 52—P

TYPHOID in vaccinated 123—T [Tournade] (76) 153 [Bernard] (29) 924 [Labbé] (51) 18[illegible]
infection in [Vaughan] 1365—ab
intestinal perforation in ambulant unrecognized [Fuhrmann] (77) 1750
intestinal perforation in mild without agglutination, [Malin] (48) 844
intestinal perforation suprapubic drainage of pelvis after [Iselin] (51) 988
laboratory infection with 958—E
leukopenia in [Austin] *1084
mild and febrile disordered digestion from stomach trouble [Bernard] (52) 1825
milk cause of 579—E [Ustvedt] (64) 1498
milk cause of at Northbridge 1651—ab
mortality alcoholism as factor in [Labbé] (48) 776
orchitis and epididymitis [Olmer] (76) 1826
oysters cause of outbreak of [Brooks] *1445
pasteurization of milk as protection against [Geiger] *263
prophylaxis of 441 [Mehler] (32) 1272 [Henkel] (94) 1750
pyramidon and baths combined in [Wortmann] (117) 780
rate in Pittsburgh 1629—T
salt solution intravenously in [Engländer] (101) 315 1321
simulating typhus [Spät] (113) 611
skin reaction indicating protection against [Pulay] (77) 230
surgical complications of [Knott] (56) 383
tetragenus sepsis after 3 cases recovery [Welz] (49) 1357
Toronto and 2061—ab
treatment of newer points in [Robinson] (65) 772
tremor following resembling paralysis agitans [Cross] (121) 611
vaccination [Schofield] (47) 383 [Bliss] (119) 773 1561
vaccination against and inoculation with experimental [Emmerich] (72) 846
vaccination against cholera and [Seiffert] (64) 228 [Hueppe] (51) 312 370 [Wassermann] (65) 540 [Nedrigailoff] (115) 1666
vaccination against cholera and scarlatiniform tardy exanthem after [Frieboes] (62) 1064
vaccination against cholera and technic and experiences [Bujwid] (54) 695
vaccination against paratyphoid and by combined method 193—E
vaccination against paratyphoid and reaction to [Tonnel] (41) 1748
vaccination against paratyphoid and triple [Widal] (52) 988
vaccination against paratyphoid bacillary dysentery and combined preventive [Johnson] (20) 606
vaccination agglutinins in blood of children after injection of [Medovikoff] (82) 1896
vaccination and diagnosis of typhoid in vaccinated [Hage] (50) 66
vaccination and immunity to [Noack] (88) 68
vaccination arouses old latent disease [Bardach] (93) 541
vaccination complications of [Akhiezer] (88) 1896
vaccination decline of typhoid since introduction of charts showing [Labbé] (53) 776
vaccination during 1915 961—ab
vaccination enlargement of spleen after [Hirsch] (51) 66 [Kammerer] (104) 779
vaccination in forces [Fleming] (27) 461
vaccination in Russian army [Tarassevitch] (36) 2128
vaccination influence of on sero agglutination and course in typhoid and paratyphoid [Rist] (53) 1825
vaccination lack of protection after reasons for [Nichols] (72) 986
vaccination pathologic conditions after 907
vaccination present status of [Silvestri] (118) 849
TYPHOID vaccination routine immunization of 3 500 patients in institution [Weston] *1089
vaccination Widal reaction after [Datta] (88) 1827
vaccination year's experience with [Maurange] (75) 151
vaccine 191
vaccine and foreign protein in typhoid intravenous use of [Miller] (46) 458
vaccine antibody production after vaccination with various [Gröbl] (113) 543
vaccine iodized [Ranque] (21) 380
vaccine polyvalent sensitized intravenous injections of [Cas] (9) 770
vaccine production of immune bodies by [Löwy] (43) 66
vaccine prophylaxis of [Whalen] (140) 1275
vaccine sediment sensitized intravenously in [Cas] 2030—ab
vaccine technic for preparing and administration of, [Nedrigailoff] (79) 464
vaccine therapy [Mayer] (62) 695 [di Cristina] (123) 780 [Würtzen] (134) 780 [Waltzfelder] (103) 841 [De Lucchi] (77) 1664
vaccine therapy of in children [Ortiz] (43) 151 (46) 925
vaccine therapy with mouse typhoid bacillus vaccine [Zupnik] (108) 848
vaccine therapy with stock vaccines [Whittington] (26) 1585
vertebral affections in convalescence from [Lyon] (87) 541
war [Carles] (30) 1061 [Frugon] (78) 1173
water borne death from was accidental 981—Ml
water borne epidemic of at Santa Barbara [Geiger] (23) 1579
Widal reaction in diagnosis of in vaccinated [Salomon] (66) 1172
Widal reaction in diagnosis of paratyphoid and [Davison] *1297
Widal reaction in easy and rapid method of doing [Coles] (6) 2041
Widal reaction in vaccinated persons and influence of febrile conditions on inoculation agglutinins [Dreyer] (27) 1585
will drawn during validity of [Benitez] (77) 1896
TYPHOIDIN quotient [Kilgore] (14) 456
reaction [Austrian] (29) 1890
TYPHUS [Marcovich] (120) 611 [Wiener] (113) 929
catarrhal intestinal disease dysentery and mixed infections [Arneth] (57) 1278
differential diagnosis between typhoid and [Habetin] (102) 848
droplet transmission of [Stefansky] (114) 1666
epidemic of [Otto] (49) 66 (88) 154
epidemiology of [Anderson] (135) 63
eruption brought out by constricting band in early stage of [Dietsch] (114) 779
etiology of 1782—E
etiology of and louse extermination [Beyer] (87) 1822
etiology of in Mexico [Olitsky] *1692
exanthem in histology of [Kyrle] (84) 230
exanthematicus epidemic in Balkans and in prison camps of Europe [Caldwell] *326
experiences with [Meyer] (50) 1278 [v Torday] (59) 1358 [Neukirch] (62) 1358
guarding against 202
in camp of war prisoners [Rondke] (60) 67 [Müller] (55) 228 (98) 610
in Galicia [Kaup] (96) 1281
in Mexico 44 203
in Poland 522
in Russian army [Shirokogoroff] (128) 850
in Serbia [Rudis Jicinsky] (136) 63 [Howell] (10) 149 [Minkine] (29) 311 [Chesney] (46) 1824
inability to put out tongue in, [Remlinger] (39) 607
investigator Morris Buttner dies 826
TYPHUS louse as possible germ of, [Stempell] (65) 1740
martyr roll of 826 1782—E
physicians ill with in Mexico 967
precautions against at Matamoras 904
serodiagnosis of [Cotschlich] (76) 540 [Weil] (101) 848
sporadic case of, [Davis] (142) 385
treatment modern [Coglievina] (68) 314
typhoid simulating [Spät] (113) 611

U

ULCER corneal dacryocystitis as predisposing cause of [Scott] 1347—ab
corneal pasteurization in treatment of [Prince] (140) 1431
corneal recurrent [Kinnier] (76) 147
distilled water for subcutaneous injections in [Stephens] (25) 310
duodenal portion of pylorus new symptom of [Stern] (21) 146
duodenopyloric fornix [Jefferson] (32) 984
duodenum [Mullins] (130) 63 (120) 385 [Boas] (76) 777 (64) 845
duodenum and appendicitis [Flynn] (180) 63
duodenum differential diagnosis [Wulff Van Amstel] (81) 847
duodenum electrotherapy and diathermia in [Rubens] (100) 154
duodenum jejunal for [Bland Sutton] (26 28) 987
duodenum pathogenesis of and anatomic and physiologic subdivisions of duodenum [Jefferson] (31) 984
doudenum symptoms of and chemical activity of stomach [Mintz] (131) 850
duodenum treatment of [Bassler] (101) 1275
intestine perforations at or near pylorus [Battle] (21) 1824
jejunum [Bryan] (113) 1059
leg chronic [Farmer] (163) 149
new and old [Bland Sutton] (26 28) 987
peptic from viewpoint of medical selection [Cook] (102) 535
peptic postoperative treatment of cholecystitis and [Verbrycke] (87) 1582
pylorus and duodenum perforating cases of [Mackay] (13) 1660
rectum and colon [Klemperer] (107) 541
rectum and suppurative colitis [Klemperer] (93) 314
skin in malignant tumor treatment of [Tugendreich] (39) 1357
stomach acid of gastric juice in pathologic processes of [Bolton] (14) 225
stomach and duodenum carbohydrate factor in causation and treatment of hyperacidity and [Stone] *324
stomach and duodenum chronic [Bradford] (96) 535
stomach and duodenum clinical study of [Koehler] (117) 841
stomach and duodenum diagnosis of [Walcott] (117) 921
stomach and duodenum diagnosis and medical treatment [McClymonds] (60) 307 [Dunham] (129) 309
stomach and duodenum diagnosis and surgical treatment [Bunts] (130) 309
stomach and duodenum diagnosis and treatment [Haines] (131) 309
stomach and duodenum duodenal feeding in [Arnelll] (15) 1657
stomach and duodenum perforated end results of 14 operations [Gibson] (96) 1354
stomach and duodenum perforation of [Warren] (26) 150 [Abell] (54) 1658
stomach and duodenum secretion of gastric juice in [Hardt] (31) 1427
stomach and duodenum surgery of and insurance risk [Gage] (96) 223
stomach and duodenum surgical treatment of [Casper] (61) 307 [Woolsey] (90) 1275
ULCER stomach, bacteriologic and experimental studies on [Celler] (16) 2126
stomach cause of [Burge] *998
stomach differentiation of cancer and [Zoeppritz] (79) 846
stomach excision of ulcer bearing area in surgery of stomach, [Suttner] (114) 841
stomach experimental production of [Wilensky] *1382
stomach experimentally produced with staphylococcus organism [Steinharter] (37) 1744
stomach following removal of suprarenals study of, [Mann] (68) 533
stomach indurated roentgenoscopy of [Cole] (11) 146
stomach medical treatment of [Tompkins] (51) 1744
stomach multiple acute after using Percy's cold iron for inoperable cancer fatal case [Leonard] *1549
stomach perforated [Guilleminet] (32) 1495
stomach perforated tamponade of case of [Corner] (18) 986
stomach surgery of [Knott] 304—ab (36) 1272
stomach traumatic cases of [Elliott] (6) 1584
stomach treatment of [Andersen] (68) 1058
stomach trophic element in origin of [Durante] (97) 1354
syphilitic of lower legs and feet [Senear] (79) 773
tanners [DaCosta] (36) 689
varicose leg treatment of [Skillern] (38) 689
varicose of foot and leg perforating nerve operations in [Smits] (14) 1888
varicose veins and operative treatment [Homans] (113) 604
venereal excision of with laryngologists flat actual cautery [Fuchs] (49) 844
ULNAR nerve late paralysis of [Hunt] *11
nerve lesion selective sensory regeneration in [Coriat] *407
ULTRAMICROSCOPIC viruses investigation on nature of [Twort] (27) 150
ULTRAVIOLET radiation in destruction of hormones proenzymes and enzymes [Burge] (4) 1819
rays and warm baths in wounds [Hufnagel] (74) 539
rays check proliferating power of protozoa [Porcelli Titone] (104) 1590
rays for typhoid bacilli carriers [Hufnagel] (68) 1279
rays in dermatology [Fischkin] (28) 1820
rays in gynecology report of cases [Hellman] (20) 1427
rays injurious action of on eye [Burge] (29) 382
UMBILICAL cord prolapse of cesarean section for [Boero] (80) 391
UMBILICUS care of [Müller] (121) 155
congenital defect of without protrusion and nervous dyspeptic symptoms [Aaron] *1534
hernia end results in 70 cases of in Massachusetts General Hospital [Simmons] (39) 984
UNCINARIASIS [McGraw] (17) 1165 [Thornburgh] 2121—ab
at Cuyamel, [Barlow] (133) 224
beta naphthol in [Corteling] (17) 1584
control of [Gunn] 1422—ab
diagnosis and treatment [Whyte] (2) 2126
eradication in Georgia final report of work [Fort] (34) 221
thymol in [Fechtig] (129) 1355
thymol in at U S Marine Hospital [Grave] (110) 1659
UNGER'S instrument for syringe transfusion 1823—T
UNITED STATES Army See Army United States
UNITED STATES civil service examinations for statistician and physicist 1036
Commission to investigate proprietary medicine business 974—P
Public Health officers in medical associations 1313—E 1318 2002—ab
Public Health Report of Secretary of Treasury 128
Public Health Service and Territorial Health Authorities conference of 1713

in infants, [Vaglio]
FRACTURES, new method of a
ing autogenous intramodiALUS, incision in oc-
bone transplants and of ml puncture of lateral
autogenous bone screws, I for drainage in
lund] (90) 580 3fer & Mühsam] (58)
of long bones primary sut
[Bonnet] (40) 1877 occlusion of aqueduct of
open treatment of, of lois in relation to, [Schlapp
[Grant] 221—ab re] (1) 1872
os calcis, mechanics c treatment of, preliminary
nuson] *530 of 41 patients, [Sharpe]
spine, treatment of, [Sh1579
222 EPHROSIS, 1550—T
thigh, appliance for l, complicating pregnancy,
treatment, [Page] (19r catheter drainage in,
treatment, new methodlk] *675
cision in, [Hawley] "e of venous collateral cir-
treatment of deformed lon of kidney on, [Barney]
nonunion of [Roberts 1662
treatment suspension bHOBIA, Pasteur treatment
(15) 69 paralysis after, [Mejlo] (63)
FRAMINGHAM experime
ganized effort at comlive treatment of, [Murillo]
trol of disease 999—) 1353
FRANCE, improvement IHTHALMOS, familial ab-
tion of military surgally large cornea and re-
558 a to [Gronholm] (100] 886
FPANCIS JOSEPH, empeS l See Dropsy
tria death of 861 HEA gravidarum 568
FRANCO-RUSSIAN med LPINX, pathologic anat-
mittee, formation of, etiology pathogenesis and
FRANK S subcutaneous al experiences [Jägerroos]
tomy, [Burckhardt] 319
FREEMAN S Balsam of L, personal, of troops 1493
565—P IC testament of late Pro-
FREEZING See also Fr Czerny, 791
FREEZING vasomotor aMIA Bier's suction appa-
jury from importang in thromboangiitis oblit-
(85) 1072 s, [Sinkowitz & Gottlieb]
FRENCH pharmaceuticals;
(45) 1786
FRIEDREICH'S DISEASE CEMIA epinephrin in-
field, Latham & Campt of intravenous injections
1215 im carbonate on glyco-
FROST-BITE See also Fr ld, [McDanell & Under-
T-BITE erysipelas 3) 1064
personal inju KOCYTOSIS and its
on specific therapy,
Ml r & Tsen] (83) 1664
super rnal hemorrhage [Dold]
] (112) 157 J2
treatment fc HROMA 1911—T
[Bartlett] *1904 NSION See Blood Pres-
FURUNCULOSIS, sterilizhigh
ment of, [Bowen] (ERMINE 1497—P
YROIDISM and certain
G disorders, [Eastman] (61)

GALEGA, alleged galacecognition and treatment
tion of 1570—P isler & Johnson] (124) 809
GALLBLADDER calculus of boiling water in
titis with and withow] (35) 1143
222—ab iotherapy of exophthalmic
calculus in Peru, [Wand [Simpson] (118) 1146
1151 NIA, intentional, [Schwab]
calculus, obstruction 149
main factor in SIS Cerebri See Pitu-
processes, [SprengeBody
calculus, recurrence ADIAS new operation for
222—ab] *1032, [Beck] (102) 1508
calculus removal of TOMY, vaginal subtotal,
contract for 142—b and technic of for pro
carriers, alkaline t of uterus and cystorecto-
detection by al associated with fibroid
tube, [Nichols] *ths or fibrosis uteri, [Vine-
Disease See also] (138) 402
disease diagnosistIA traumatic, [Somerville]
(7) 1579 —ab
disease, cholecyste
ler] (9) 1579 EAM and bacteria 1263—E
diseases genesis ninated by typhoid carrier
on 1912—E se of epidemic, [Cumming]
disturbance of lav
nervation as pat of laws fixing minimum
in disease of centage of butter fat for,
[Meltzer] (6) 32—Ml
effect of op HYTAR, 796—P
[Macht] (65 RUS See Jaundice
effect of rem O medical news, 205, 643
Mann] (111) board October report 215
ALL DUCTS Se Sight Restorer, 50—P
LLSTONES See also Feeblemindedness
Calculus
LVANOPALPA mongolian, syphilis as eti-
[Kahane] ologic factor in, [McClelland &
NGRENE etub] *777, [Goddard] 1057—C
in syphilitioCOLIC sphincter, effects of
(112) 1672 lrugs on, [Kuroda] (62) 225
s and baNOIS and Iowa physicians to
onds] (45) meet 1052
gas, bacillus mittee on medical prepared-
intoxicationess, 1131
*1815 olidation bill becomes law,
gas diagnosis 9—ME
159 ical college requirements in,
gas patholenendments to 967
of, [Taylo ical news, 42, 127, 205 293
gas sugar er 9, 469 555 643 720, 787, 850,
of, [Bogo 19, 987, 1049, 1132, 1192, 1271,
impending 1489, 1563, 1639, 1707,
rigidity as sign
1511 ation in 855—E
in wounded, [Tansini] (60
necessity for keeping venous blood
in limb to prevent, after ligation
of artery, [Sehrt] (38) 666

W
W
W
W
W
Wi
Wir
Wir
Wins
W
W
W
W
W
Wo
Wo
Wri
Wr
Wy
Yal
Yan
Yate
York
Youn
Youn
Youn
Youn
Youn
Zimm

IMMUNE and anaphylactic reactions, analysis of, by means of isolated guinea-pig lungs, [Manwaring & Kusama] (49) 875
IMMUNITY research and surgery, [Hadley] (62) 148
INANITION, ketonuria and acidosis in children, 786—E
INCUBATOR, simple, [Skeel] *911
INDIAN physicians and color bar at a London hospital, 298
INDIANA medical news, 127, 205, 469 555 720 788, 1050 1135, 1271 1331, 1417 1489 1639
state board January report 1431
INDICAN in urine test for, [Askenstedt] (63) 1782
INDIGESTION See Dyspepsia
INDIGO red in urine, [de Jager] (87) 319
INDOL phenol blue synthesis in identification of cells in myelomas, [Forman & Warren] (59) 660
INDUSTRIAL accident mortality in 1916, 1677—ab 1934—ab
diseases and industrial poisoning, [Pometta] (72) 1071
diseases attitude of Department of Labor and Industry toward problem of, [Jackson] (88) 1508
diseases in chemical trades, 636—L
diseases, literature on 931
hygiene standards 382
hygiene work of municipality in 1653—ME
hygiene work union endorses 1566
medicine and surgery night clinic on at Rush Medical College [Mock] 1573—C
pensions in Sweden 484—ME
poisoning and occupational diseases, [Pometta] (72) 1071
poisons encountered in manufacture of explosives, [Hamilton] *1445
surgery and medicine, a new specialty, [Mock] *1
therapy 922
INEBRIETY See Alcoholism
INFANTS adenoid vegetations in and causes [Marfan] (39) 2010
assisted" up to two months of age [Hertz] (105) 886
cancer in liver of one-year babe [Frølich] (137) 947
carbohydrate starvation in [Bloch] (93) 1444
care of children and, during war 1767
contract of hospital to care for received along with mother 308—Ml
diarrhea in from general infections [Bernheim Karrer] (57) 1205
diarrhea of breast fed treatment of [Marfan] (36) 942
duodenal ulcers in [Brown] (29) 1434
effects of war on [Tshirch] (78) 232
eye disease and other disturbances in from deficiency in fat in food [Bloch] (102) 1516
feeding, condensed and desiccated milk in, [Marfan] (44) 1668
feeding gruels commonly used in composition of, [Bratke] (78) 155
feeding, influence of, on state of nourishment and development of muscles in late childhood, [Wedholm] (98) 746
feeding studies of [Bosworth & Bowditch] (74) 401
heart diseases in, [Goodman] (28) 311
hydrocele in [Vaglio] (51) 1513
in Berlin, extra sugar for, 297
incubator for, [Skeel] *911
marasmic, [Raimondi] (17) 664
mortality in Wisconsin, [Mendenhall] (125) 1066
mortality, lowest death rate on record, 1275
new born amino acid nitrogen of blood in [Morse] (27) 1942
new born, exfoliating dermatitis in relation to pemphigus, [Wirz] (57) 229
new born, familial jaundice of, [Abt] (3) 936
new-born microbic flora in mouth and rectum of [Hymanson & Hertz] (9) 1287
new born, treatment of gastro-intestinal hemorrhage in, [Triollet] (42) 1008
nutritional disturbances in and mineral substances, [Friderichsen] (112) 17
obtaining bloo
cyst with secondary,
corneal
[Hagen] (124) 234

INFANTS phenol excretion in urine of including new born, [Moore] (2) 309
pneumococci in children and types of, [Mitchell] (94) 1005
pyelitis in infancy, 1908—T
pyelitis of, hexamethylenamin in, 1100—T
pyloric stenosis in [Gallie & Robertson] (55) 488, [Sloan] (15) 577 [Holt] *1517
pyloric stenosis in surgical treatment of [Monnier & Vulliet] (51) 942
rachicentesis in, [Lavergne] (42) 2010
syphilis in [De Buys] (21) 734
tuberculids in children and frequency of, and their relation to prognosis [Hempelmann] (16) 2007
tuberculosis in, treatment of, [Combe] (13) 663
tuberculous meningitis in [Bordot & D Ovidio] (76) 1951
umbilical disorders of, and Meckel's diverticulum, [Harbin] (160) 738
welfare of factory workers nurslings [Doleris & others] (44) 1149 (31) 1293
welfare work in Paris, [Pinard] (42) 191 (31) 1148
welfare work intensive methods in 1484—F
INFECTIONS acute renal function in [Frothingham] 1940—ab
acute treatment of circulatory failure in [Goodridge] (21) 310
focal bacteriology of urine in and relation to nephritis, [Dick & Dick] (31) 1063
nonspecific measures in, [Manler] 1286—ab
Puerperal See Puerperal Infection
INFECTIOUS DISEASES inherited question of, [Yurgeliunas] (124) 946
parenteral injections of peptone for [Nolf] (48) 1349
INFLUENZA epidemic and anomalous throat signs, [Shera] (32) 1348
etiology of epidemic acute respiratory infections commonly called [Mathers] *678
in London 210 647
pneumonia 8 cases, [Federici] (71) 1220
INSANE acetone in urine of, [Mills & Wearne] (115) 150
decrease in number of, and war, 1274
goiter among [Kemp] (73) 1945
herpes zoster in tabes dorsalis and general paralysis of, [Immerman] *1607
oculocardiac reflex in, [Gorritie] (93) 1073
pellagrins, bacteriologic findings in, [Tizzoni] (86) 1352
utilization of in preparedness movement 1191
vasomotor unrest in, [Ehebuske] (20) 1002
INSANITY See also Mind, Diseases of Psychiatry
INSANITY and pelvic diseases in women [Manton] (78) 808 [Peterson] (79) 808
in Philippines [Goff] 1343—ME
in Quebec increasing, 557
manic depressive make-up of atypical cases of [Clark] (70) 1782
INSECTS and reptiles on Mexican border [Coughlan] *1549
INSTITUTE for Research on Psychiatry, 472
INSTRUMENT See also Apparatus
INSTRUMENT for application of radium to prostate and bladder, [Young] *1174
for application of sewing machine stitch in gastric and intestinal surgery, [Quain] 144—ab
for deep sewing [Walker] *707
for retrograde sounding of urethra [Stevens] *911
ligature knot tier [Boettcher] *1403
rust on, wea of sor
for removal (95) 1
sterilization yd
por 1197
sterilization n liq
petrolatun 7
urethral c
*1696
water-coole
with ca
1253

INSURANCE, health and medical profession, [Lambert] *2 [Warren] (113) 1005
health and young doctor [Emmons] 651—C, [Woodruff] 754—C
health, another scheme for [Ratcliffe] 798—C
health, chimera of, [Cone] *491—C
health compulsory 29?—E, [Andrews] 390—C [Chapman] 546—C [Andrews] 7?9—C [Bowen] 797—C [Chapman] 797—C [Hoffman] 865—C, [Goldwater] 930—C, [Andrews] 991—C [Cone] 1140—C, [Rubinow] 1278—C, [Appelbaum] 1335—C [Schulman] 1429—C
health compulsory arguments against standard bill for [Delphey] 1500—C
health compulsory, discussion on, [Lambert & others] 803—ab
health compulsory economic disadvantages of, [Curtis] 80?—ab
health compulsory, needs and possibilities [Fisher] 801—ab
health compulsory, unnecessary as public health measure [Hoffman] 480—C
health, criticism of tentative draft and its promulgation, [Delphey] 802—ab
health tentative draft [Kopetsky] 802—ab
health vs sickness insurance 1427
life and tuberculosis [Thompson] (95) 661
life temporary ailments disregarded 1868—Ml
simulation and aggravation of morbid conditions in relation to [Kiefberg] (103) 1799
social, for parturients in Italy 1146
social its bearing on profession and public as observed in Great Britain and on Continent, [Neilson] 396—ab
social medical services in [Lewis] 797—C
social report of A. M. A. committee on 1721
social, tuberculosis during war from standpoint of, [Reche] (62) 667
INTERNATIONAL Health Board, cooperation with 558
INTERSTATE control and pollution of streams 717—E
quarantine regulations 123
INTESTINE, action of adsorptive agents on [Petersen] *1234
action of various female remedies on [Delzell, Burman & Pilcher] (3) 64
anastomosis without opening lumen [Gudin] (31) 315
autointoxication clinical investigations as regards question of specificity of toxin, [Brown] (5) 222
bacteria in children [Ford Blackfan & Batchelor] 1776—ab
bacteria milk and lactose in control of 918—E
bacterial flora of, and diet 1480—E
cancer roentgen findings in 23 cases of [Bensaude & Guenaux] (34) 1008
eosinophilia report of case [Barnett] (23) 1180
flora experimental studies of [Nelson] (1) 658
flora influence of milk and carbohydrate feeding on character of [Hull & Rettger] (68) 483
gas cysts of, [Schnyder] (56) 12
goblet cells in protozoan infections of [Hadley] (47) 1289
obstruction [McCabe] (190) 130
obstruction due to ascaris lumbricoides [Perret & Simon] *44
obstruction intoxication in closed intestinal loops [Draggstedt Moorhead & Burcky] (44) 538
obstruction, toxemia of, 914—E
pellagrous and some of its parasites, [Lynch] (60) 1346
protozoa of nondysenteric cases [Smith & Matthews] (?) 911
stasis treatment of [Gifford]
—C
suture minor points of technic in
end to end suture of, [Fictie]
1010
NAL pressure also
tion of, [Landon] *1
EOUS absorption
of, [Smith & Cook] 1
intestinal, un-
[Van Buren] *15
of
and

UNITED STATES Public Health Service conference with State Health Officers 287, 1633
  Public Health Service divisions of mental hygiene and rural sanitation for, 1933
UNITED Students' Aid Society, warning against 827
UNIVERSITY See also Colleges Education Schools Medical
UNIVERSITY camp, in Italy allowing students to keep up with classes, 968
  Medical School and Hospital at Rosedale [Major] (69) 1745
  of Berlin losses of in war 44
  of Lausanne medical department of early history of, [Delay] (38) 312
  of Paris, losses in war 123
  of Pennsylvania amalgamation between Medico-Chirurgical College and Hospital and articles of 1861—E 1881 [Anders] 2027
  of Pennsylvania limits enrolment of students 1036
  Polish and Flemish planned 667
URANIUM nitrate inhibition of toxicity of by sodium carbonate [MacNider] (65) 533
URATE solvent hexamethylenamin as diuretic and and effect on reaction of urine, [Hanzlik] (47) 772
UREA and quinin anesthesia in tonsillectomy [Burns] (23) 1351
  and quinin in toxemia of lung tuberculosis [Cohen] (89) 841
  and quinin injections in hyperthyroidism [Watson] (65) 1493, (132) 1823
  as bactericide in wounds [Symmers] (25) 150
  content of cerebrospinal fluid [Canti] (18) 922
  excretion clinical determination of kidney function by [McLean *415
  excretion rate of, [Addis] (45) 1057
  in blood determinations in 211 cases [Schwhrtz] (16) 456
  in blood in nephritis significance of [Myers] (49) 1429
  in urine determination by urease method [Fiske] (86) 147 [Van Slyke] (38) 771
  liver in formation of from amino acids, [Jansen] (121) 317, (106) 992
  toxic effects of on normal individuals [Hewlett] 2004—ab
UREASE method of determination of urea [Fiske] (86) 147, [Van Slyke] (38) 771
UREMIA, blood letting in [Robinson] (132) 1431
  chronic nephritis with [Baumann] (36) 918
  sodium bicarbonate injections in prevention of [Rogers] (5) 2126
URETER calculus in kidney and [Cale] (149) 385
  calculus, roentgenoscopy of [Meyer] (95) 223
  duplication unilateral, [Simon] *1686
  duplication, with transposition of viscera, [Komendantoff] (101) 1666
  kinks [Vass] (153) 606
  multiple with hydronephrosis, [Peacock] *1088
  pharmacology of [Macht] (104) 1430, (71) 1892
  transplantation of in exstrophy of bladder [Stokes] (22) 2127
URETHRA, access to at junction with bladder technic for [Rochet] (35) 1747
  calculus in boy of 14 [Bokay] (86) 778
  calculus in fossa navicularis [Morgan] (4) 1355
  calculus large, rupture of urethra extensive extravasation of urine [Berry] (88) 841
  cancer, primary and retention of urine from obstruction radium in [Shoemaker] (94) 2040
  discharge from, [Peterkin] (92) 1275
  double, case of, with operation, [Mackenzie] (122) 1059
  drop-like bodies in epithelial cells of postgonorrheal urethral secretion, [Cedercreutz] (93) 465
  gonorrheal infection of glands of, [Lefort] (64) 1493
  lacerated, vein transplanted to patch, [Legueu] (53) 1587
URETHRA prostatic portion of male [Abernethy] (144) 310
  rupture of male, [Smith] (109) 1275
  stricture of cardiovascular disease due to 2 cases [Yeardley] [illegible]
  wounds involving retention catheter in, [Rothschild] (90) 928
  wounds of neck and, [Litthauer] (38) 694
URETHRITIS chronic curability of [Reynolds] (83) 1058
  chronic in women, [Shallenberger] *1011
  gonorrheal management of [Goldman] (93) 1659
URIC ACID See Acid Uric
URINARY TRACT affections of from chilling, [Blum] (105) 315 (60) 695
  calculi in [Cassidy] (83) 1167
  disease of development of clinical diagnosis of [Ebstein] (94) 69
  disturbances in male, [Martin] (114) 459
  infection acute, with paratyphoid B bacillus, [Worster-Drought] (9) 1892
  infection diagnosis and treatment of [Cobb] (122) 1355
URINE acidity of total 978
  albumin and sugar in simple method for determination of, [Lenk] (45) 66
  albumin in determination of [Gad-Andresen] (105) 1828
  albumin in phosphotungstate test for [Sueyoshi] (120) 930
  albumin soluble in acetic acid study of, [Cavazzani] (76) 1664
  amylase in blood serum and quantitative determination of [Stocks] (29) 1894
  bacteria in, method of demonstrating by means of centrifuge [Crabtree] (128) 605
  bacteriologic examination of [Bull] (36) 1824
  chlorids in, in scarlet fever determination with Weiss chlorometer [Ostrovsky] (108) 1666
  chlorids in silver chlorid centrifuge test for, [Sueyoshi] (119) 929
  chlorids in test for estimating founded on Volhard s method, [Seelman] (60) 1273
  color reaction in with cancer [Welwart] (71) 1359
  creatin in occurrence and determination of [McCrudden] (91) 1430
  diazo and urobilinogen reactions in in typhoid [Pick] (97) 610
  effect of hexamethylenamin on reaction of [Hanzlik] (47) 772
  effect of hexamethylenamin on uric acid solvent power of [Haskins] (37) 59
  elimination of certain elements of with liver disease [Moraczewski] (85) 68
  examination and general practitioner [Kilduffe] (24) 146
  examination in life insurance, [Eckler] (73) 1822
  examination of feces and of suspect typhoid carriers report on elaterin catharsis, [Tonney] (66) 920
  examination significance of findings [Klein] (91) 773
  glycuronic acid in as index of liver functioning, [Gautier] (69) 1587
  incontinence of from spinal lesion, congenital and acquired, [Spiller] (1) 1426
  incontinence of habit or disease, [Lukens] (94) 921
  incontinence of, hypnosis in in soldiers on active service, [Sauer] (94) 847
  incontinence of nocturnal treatment of [Mendeloff] (150) 606
  incontinence of reflex treatment of [Deluca] (91) 1827
  Klutsi Malone test of for pregnancy [Cutter] *559
  lead in, in trench nephritis 4 cases, [White] (11) 2041
  lipase in in tuberculosis, [White] 2031—ab
  nitrates in origin of, [Mitchell] (96) 1430
  picric acid in detection of, [Grimbert] (25) 1001
  picric acid in with picric jaundice ferrous sulphate test for, [le Mithouard] (35) 65
  retention due to primary cancer of urethra radium in [Shoemaker] (94) 2040
URINE retention due to syphilis, without other symptoms, [Keysor] (36) 603
  retention, treatment of [Crawford] (79) 147
  secretion of, from chemical and physiologic standpoint, [Backman] (99) 1174
  sediment, differential staining of improved technic for, [Fittipaldi] (89) 231
  sugar as normal constituent of, [Nelson] (103) 148
  test five glass catheter [Wolbarst] (102) 1822
  test for syphilis and comparison with Wassermann reaction [Gray] (80) 1745
  test 7 glass [Pedersen] (118) 1659
  testing with Esbach s albuminometer, [Jones] (23) 606
  tests 376
  urea in, determination of by urease method [Fiske] (86) 147, [Van Slyke] (38) 771
  uric acid solvent power of after administration of piperazin, lysidin and lithium carbonate [Haskins] (21) 1058
  urochromogen reaction in of children, [Genoese] (76) 390
  vesical stasis of, and urinary tract infections [Curtis] *1456
UROBILINOGEN and diazo reactions in urine in typhoid [Pick] (97) 610
UROCHROMOGEN and diazo reactions [Bosch] (49) 695
  and diazo reactions in lung tuberculosis [Sinclair] *247
  reaction as aid to prognosis in lung tuberculosis and nontuberculous disease [Burgess] *82
  reaction in children s urine [Genoese] (76) 390
  reaction in lung tuberculosis [Biesenthal] (59) 147 [Cowen] *791
URO-ERYTHRIN, influence of quinin on production of, [Pane] (42) 1433
UROLOGY diagnosis in, [Baynard] (158) 310, [Wittenberg] (97) 1583
  German in war, [Lohnstein] (95, 98) 69
  in gynecology [Furniss] (106) 986
  renaissance of, [Young] (138) 692
  value of endoscopy in [Mobley] (157) 310
UROTROPIN See Hexamethylenamin
URTICARIA and erythema due to sensitization to certain foods, [McBride] (51) 919
  formalin [Heidingsfeld] (44) 1272
  in children [Hallperin] (127) 224
  tuberosa of William report of cases [Nixon] (30) 1893
URUGUAY, national medical congress in 1397
UTAH medical news, 286 438, 750 1035
UTERINE stem [Boldt] *1000
UTERUS abscesses retro uterine [Ilagerroos] (92 100) 1066
  absence of vagina and, case of, [Warren] (45) 1580
  action of drugs on insufficiently investigated 1205—E
  anteflexed mystery of, [Dickinson] (108) 536
  cancer [Werder] (5) 146 [Manton] (72) 772
  cancer cervical abdominal hysterectomy for [Maurer] (43) 227
  cancer cervical, heat in [Nesselrode] (115) 921
  cancer cervical inoperable cautery in primary and end-results [Seeley] (60) 1353
  cancer cervical radical operation for report of 40 cases [Sampson] (107) 841
  cancer cervical, radium in [Miller] (101) 1354
  cancer, cervical treatment of [Jones] (73) 1167
  cancer, heat in [Boldt] 142—ab, (1) 381 [Percy] (103) 384 (144) 536 [Rogers] (139) 1275 [Newell] 1349—ab [Boldt] 2033—ab
  cancer, inoperable heat in [Percy] 2033—ab
  cancer mesothorium in 100 cases [Baisch] (80) 990
  cancer operations for, relative merits of [Balfour] (102) 384
  cancer, operative treatment of [Waegeli] (82) 153, [Taylor] (101) 384
UTERUS cancer persistent uterine hemorrhage complicating radium in, [Miller] (140) 1583
  cancer prophylaxis of, [Watkins] (102) 1354
  cancer radium exposures apparently cured, [Akerblom] (148) 156
  cancer radium in 347 cases, [Kelly] 2033—ab
  cancer restricted hysterectomy and radium exposures in [Pozzi] (46) 227
  cancer roentgenotherapy of [Gugelsberg] (58) 539 [Case] (100) 1354
  cervix, discission and adjustment of intra-uterine stem versus dilation of [Boldt] *1000
  cervix lacerated [Goodwin] (139) 1060, [Forster] (25) 1272, [Lynn] (124) 1275
  cervix mechanical dilation of instrument for [Wichmann] (131) 994
  cervix surgery of inefficiency and neglect of critique on [Bovée] (16] 1426
  degenerative changes in [Donohoe] (58) 383
  displacements, [Nyulasy] (107) 384
  displacements chronic correction of [Inge] (140) 1060
  double vagina and new bloodless operation for correction [Rockey] (19) 1888
  fibroid completely obstructing canal [Pfaff] (8) 146
  fibroid 132 consecutive operations for [Jones] (83) 1822
  fibroid vaginal subtotal hysterectomy for prolapse of uterus and cystorectocele with, [Vineberg] 2122—ab
  fibroma subtotal abdominal hysterectomy for technic of new procedure for [Carvallo] (122) 1745
  fibromyoma, blood pressure in [Taylor] (126) 605
  fibromyoma roentgenotherapy of [Voorhoeve] (103) 232
  fixation of, methods for, and obstetrical consequences, [Rossler] (40) 312
  hemorrhage actinotherapy in, [Schmitz] (92) 2040
  hemorrhage essential case report, [Wallace] (97) 1659
  hemorrhage persistent complicating menopause fibromyomata and cancer of uterus radium in, [Miller] (140) 1583
  hemorrhage roentgenotherapy in, [Corscaden] (3) 381
  infection of appendages of, [Montgomery] 2124—ab
  inversion of, chronic case reports, [Hubbard] (13) 1819
  inversion of puerperal case report, [Bartholomew] (83) 1659
  lower uterine segment origin and boundaries [Tweedy] (29) 1277
  morphin and scopolamin, influence on uterus, 577—E
  mucosa of cycle of, [Christides] (37) 388
  mucosa of histology of in normal pregnancy, [Brindeau] (57) 1825
  mucosa of normal glycogen in [Driessen] (35) 775
  myoma roentgenotherapy of [Stein] (63) 2040
  myoma roentgenotherapy of menorrhagia and [Lange] (153) 149 (13) 1056
  perforation of with prolapse of intestine [Heimann] (40) 1496
  pituitary extract in emptying of in early stages of pregnancy, 2 cases [Bubis] (22) 1427
  prolapse [Hardy] (152) 385, [Strasser] (90) 773
  prolapse of, operative treatment of, [Smead] (14) 381 [Field] (52) 383 [Björkenheim] (125) 894
  prolapse of vaginal plastic operations for cystorectocele and, technic of, [Frank] 2123—ab
  prolapse of vaginal subtotal hysterectomy for cystorectocele and, with fibroid of uterus [Vineberg] 2122—ab
  resection of pars interstitialis in diseases of fallopian tubes with view of preserving [Farrar] 2124—ab
  retroversion [Clagett] (148) 63 [Neel] (132) 605
  retroversion and prolapse of pessary treatment of [Dickinson] 2123—ab

NATIONAL Association for the Study of Epilepsy, meeting of 1641
Association for Study and Prevention of Tuberculosis meeting, 1052 1333
Board examination 790
[Dyer] 657—ab
Child Labor Conference 1135
Committee for Mental Hygiene, meeting of 646
Conference of Charities and Correction, meeting of, 989, 1195, 1641
Institute of Mothercraft, 298
Tuberculosis Association adopts resolutions 1641
NAVAL hospital ship Solace, charges unfounded, 1827
Medical Reserve force, to increase, 1053
Medical School begins with new class 1560
medicine 991
NAVY and Army Medical Corps will compulsory service be necessary? 1129
and medical profession in time of war [Holcomb] *1095
English health of 860
health conditions of, special committee appointed to investigate 1706
Medical Corps of, examinations for 1190, 1560
men for Hospital Corps of 1129
NEBRASKA medical news, 470 721, 929 1418, 1490 1925
state board May June report 1207
state board November report 1282
NECK operations on, local anesthesia for [Jorge] (105) 496
tuberculous glands of new incision for radical resection of, [McIlaine] *1177
SY situation in United
783—E
health week for 922
ES in butterfish and
inae in pork [Stiles] *685
VARSAN and salvarsan in
syphilis [Ormsby] *949
intramuscular or subcutaneous injection of [Harrison, White & Mills] (4) 1784
NEPHRECTOMY technic for, [Marion] (47) 1293
NEPHRITIS 459—T
acute, 635—T
acute in troops on eastern front [Rostoski & Pantaenius] (26) 665
acute treatment of 711—T
acute war etiology evolution and prognosis of [Tremolières & Caussade] (38) 1148
bacteriology of urine in focal infections and relation to [Dick & Dick] (31) 1063
blood phosphates and acidosis, 1326—E
chronic 848—T
chronic etiologic diagnosis of and hypertensive vascular degeneration [Elliott] *1955
chronic simulating symptoms of cerebral neoplasm, [Collins] *1314
chronic, symptoms in 912—T
chronic treatment of 1178—T
clinical and functional studies in, [Machwitz & Rosenberg] (62) 883
disturbed function in 548—T
epidemic [Brown] (10) 880
Ercolani's suprarenal treatment in, 1934
experimental, practical interpretations of 548—T
high blood pressure in, in children 93 cases, [Berkley & Lee] (3) 1209
in pregnancy 1984—T
increased diastatic activity of blood in diabetes and [Myers & Killian] (44) 1064
kidney function in [Smith] *278
nutrition in, 1041—T
produced by oxalic acid, 1820—E
respiratory metabolism in [Aub DuBois & Soderstrom] (28) 1872
retention of nitrogenous waste in body fluids in, [Rosenberg] (54) 584
suprarenal treatment, [Ercolani] (68) 1670
syphilis in relation to, under or near forty, [Merklen & Heuyer] (57) 1009
treatment of, [Machwitz & Rosenberg] (44) 812
treatment of convalescents from, [Robert] (73) 230
trench, [Magnus Alsleben] (50) 812
NEPHRITIS trench organism in blood in [Thornley] (5) 227
uranium in dog study in acidosis, blood urea and plasma chlorids in and protective action of sodium bicarbonate, [Goto] (73) 1582
with albuminuric neuroretinitis, eclamptic amaurosis and pseudo uremic disturbances in vision [Machwitz & Rosenberg] (82) 155
NEPHROPEXY [Lloyd] 1779—ab
cuff operation for, [McKenna] *1976
NEPHROTOMY wounds, pyelotomy drainage for [Keyes] (60) 877
NERVE blocking between 2 tourniquets [Sievers] (76) 1010
blocking in field, [Schmid] (89) 232
cells fallacy of denying functional size changes in from collective cell averages, [Dolley] *756
fiber sheath of femoral artery treatment of mal perforans by resecting [Veyrassat & Schlesinger] (46) 1217
grafting for restoring function in limbs paralyzed by injuries [Mayo-Robson] (9) 739
injury degeneration of muscle following [Roberts] (3) 1146
peripheral fibromyxomas of [Fleming & Marvin] (116) 878
peripheral inconvenience of surgical intervention in lesions of 1275
peripheral, reflex pain after war wounds of, [Yanishevsky] (83) 1515
peripheral regeneration in [Kirk & Lewis] (70) 736
peripheral surgery of, [Porter] (76) 580
regeneration sensory evidence of, [Coriat] (55) 736
repair technic of in traumatic injuries [Corbett] (76) 67
section and restoration of experimental research on [Duroux & Couvreur] (40) 315
splanchnic, tonicity of diaphragm and [Kure, Hiramatus & Naito] (79) 1514
stretching [Takimoto] (86) 1297
suprascapular isolated traumatic paralysis of [Bolten] (100) 1789
suture in war surgery value of 559
transplantation [Bethe] (28) 70
ulnar pains and contracture of fingers after injury of [Neel] (90) 1952
vagus rôle of, in pneumonia [Porter & Newburgh] (10) 2006
wounds in war [Limouzi] (38) 1786
NERVOUS system automatic histopathology of [Morse] (94) 401
system automatic histopathology of in goiter [Wilson & Young] (64) 807, [Wilson] (76) 1874
system central bladder in diseases of [Caulk & Greditzer] (16) 734
system central lesion of bladder changes due to, [Burns] (138) 1875
system, eosinophilia and anaphylaxis, [Klinkert] (95) 1152
system syphilis of oculocardiac reflex in [Auer] *901
system syphilis of spinal drainage with mercurial medication in [Pilsbury] *267
system vegetative influence of physostigmin on [Quadrone & Dematteis] (70) 1220
NEURALGIA trifacial osteoplastic closure of trifacial foramina report of cases [Horton] (44) 1346
trifacial removal of appendix for cure of [Rosenthal] (14) 146
NEURASTHENIA of heart [Singer] (49) 316
NEURITIS and paralysis as complication of intensive Pasteur treatment [Geiger] *513
in animals, influence of fresh and autoclaved cows milk on development of [Gibson & Concepcion] (126) 68
multiple secondary with tetanus [Richardson] *1611
NEUROPSYCHIATRIC units, special 917
NEU[illegible]SIS and nationality 473
inter[illegible]tation of [Dercum] *1223
thyro[illegible]reatment of, [Blanc] (71) 1351
traumati[illegible] [Oppenheim] (55) 742
traumatic [illegible] military [Strasser] (57) 12[illegible]
NEUROSIS, traumatic question of, as illuminated by experiences in war [Kuiper] (75) 1880
war 647
war among war prisoners in Germany [Lust] (46) 666
war causing grave diagnostic error, 792
war treatment of, [Mann] (58) 584
NEUROSYPHILIS intraspinal standardized salvarsanized serum in, [Stoner] *610
NEVADA medical news 721
state board May examination 1935
state board November report 305
NEVI treatment of [Newcomet] (10) 577
NEW HAMPSHIRE medical news, 1640
state board December report 1059
NEW JERSEY and chiropractic colleges 482
medical news, 206, 556 1133, 1193, 1490 1708
state board October report 139
NEW MEXICO medical news, 43, 470
state board January report 1282
state board July report, 55
state board October report, 731
NEW ORLEANS advertising in influences which keep it on decent basis 1414—E
NEW YORK Central Surgeons hold meeting 790
medical news 43 127 206 295 380 470 556 644 721 788 857 920 987 1050 1133 1193, 1272 1332 1419, 1490 1564 1708 1829 1925
state board June report 569
state board September report, 482
NEWSPAPER advertising of patent medicine 1571—P
and Tanlac testimonials 1616—P
clean advertising in 729—P
NICOTIN poisoning epilepsy from [Tedeschi] (93) 1352
NIPPLE hypertrophy of, in leprosy, [Powell] (13) 1946
Paget s disease of and its extramammary occurrence [Sekiguchi] (40) 735
supernumerary breasts and in child-bearing women in Finland [Schroderus & Wichmann] (101) 886
NITRATES action of nitrites and, on ureter [Macht] (62) 1944
NITRITES action of nitrates and on ureter [Macht] (62) 1944
NITROGEN fixing [Bucher] 1343
metabolism of 2 cases of eczema [Schamberg & Raiziss] (71) 1212
NITROGENOUS foods in diet requirement of [Maurel] (39) 583
NITROUS Oxid Anesthesia See Anesthesia Nitrous Oxid
NOBEL medical prize committee death of presiding officer of 1567
NOCTURIA 462—E
NORDAU Max interned at Madrid 1196
NORTH CAROLINA and patent medicine formula disclosure 302—P
medical news 44 128, 381 645 921 988 1490 1565
NORTHCLIFFE Lord on medical corps of army 1331
NORTH DAKOTA medical news 295 1490 1565 1925
state board January report 1342
NOSE diphtheria of, isolated [Rolleston] (3) 1584
diseases treatment by nonspecialist [Got] (11) 69
mucosa reflex action from irritating vapors on [Roger] (62) 1149
obstruction with renal insufficiency and eclampsia in pregnancy 931
pseudomembranous pneumococcus infection in throat or, [Reh] (26) 1439
secretion presence of accessory bacteria food factor in [Shearer] (25) 582
septum perforation due to inhalation of arsenic trioxid [Davis] *1620
vaccines in diseases of [Coates] *162
NOSTRUM See also Patent Medicines Proprietary Medicines Quackery
NOSTRUM advertising and agency leverage 379—E
advertising in medical journals 637—E
misbranded 135—P, 564—P 1427—P
wasteful 1484—E
NOSTRUMS and Quackery 1648—C
NOVASPIRIN tabellae dulces 461
NUCLEIN injection effect of, on leukocytes of dogs, [Fox & Lynch] (14) 1579
NURSES and women physicians medals for 1054
as roentgenographers, 792
community 892—ab
corps requirements for 1191, 1918
in Guam, 1053
legal status of as anesthetist, [Goldwater] 730—ab
neither surgeons nor charitable hospitals liable for negligence of 1939—Ml
of Northwestern unit killed 1561
restrictions on masseurs and injunction against scientific manipulator" 1575—Ml
trained competency of to testify that treatment was proper 1775—Ml
training of volunteer aids 1704
vacation in Norway for with belligerent forces 472
NUTRITION laws regulating growth and in man, [Ribesell] (59) 584
mental and physical activity with reference to blood pressure and [Heiner] (94) 1213
physiologic 860
NUTROLACTIS alleged galactagogue action of 1570—P
NUXATED IRON for that tired feeling, 642—E

O

OBSTETRICS See also Labor Presentation
OBSTETRICS in France and Germany [Pinard] (28) 228
posture in [Markoe] (31) 659
rural [Walker] 136—C
syphilitic infection in, [Bovee] (115) 68
OCCUPATIONAL Diseases See Industrial Diseases
OCCUPATIONAL therapy, 922 1321—ab
OHIO board extension of time granted by, to graduates of Chicago College of Medicine and Surgery [Matson] 1281
medical news 44 207 381 645 857 988, 1051, 1134, 1194 1709, 1829
reciprocity report 932 1142
state board December report 1058
OIL dropper, convenient [Gilman] *1177
OKLAHOMA and chiropractors, 1701—E
medical news 128 557 858 1134 1419
state board July report 393
state board October report 138
OLD AGE See Aged
OMAHA quacks fined 389—P
OMENTUM free transplantation of, [Davis] *705
great surgical research of [Bloomhardt Andrews & Hetherington] (116) 1437
torsion of, report of case [Hale] *977
ONFAL Oren pyorrhea treatment barred from U S Mail 477—P
ONTARIO health officers meet 1710
Medical Association 1710
Medical Commission 471 1491, 1710
OOPHORECTOMY See Ovariotomy
OPERATION, field of simple and efficient preparation [Foster] (133) 878
major close to firing line [[illegible]] (101) 1073
second cases not bound to let surgeon failing once perform 733—Ml
OPHTHALMIA sympathetic rarity of after war wounds, [Weekers] (37) 1585
OPHTHALMOLOGY, examinations in 790
OPHTHALMOPLEGIA headache with [Ioulard] (61) 1010
interna familial 4 cases due to congenital syphilis [Crossman] *963
OPIUM alkaloids action of [Macht] (63) 225 (84) 1212
alkaloids effects of on gallbladder [Macht] (65) 1941
OPTIC THALAMUS lesions comparative study of cases [Evarts] (66) 1782
OPTOCHIN See also Ethylhydrocuprein
OPTOCHIN 713
hydrochloride 713
ORANGE Blossom female suppositories 136—I

UTERUS retroversion and retroflexion of [Jacoby] (62) 772
retroversion operation in various classes of cases [Crossen] (94) 1[illegible]9
retroversion shortening of round ligaments of for cure of [Kellogg] (42) 1493
rupture of during labor 2 cases [Telfair] (19) 1426
rupture of report of in country practice [Swezey] (30) 771
rupture of spontaneous [McPherson] (77) 1430
rupture of spontaneous with unruptured membranes and accidental hemorrhage [Macirone] (30) 150
rupture of unusual case of [Markoe] (76) 1430
tuberculosis of cervix early [Cullen] (108) 10[illegible]9
useless troublesome removal of [Callant] (82) 10[illegible]8
ventral suspension of dystocia following [Bowen] (97) 2041
wedge excision of fundus of [Aubert] (47) 462
UVEAL tract disorders and focal infections [de Schweinitz] (70) 383
UVEITIS chronic bilateral febrile and parotitis with or without facial paralysis [Lehmann] (107) 1066
malignant thyroid extract in [Bordley] (41) 60
sympathetic [O Connor] (144) 1431
UVULA injury to soft palate and in tonsillectomies [Thompson] (86) 1275

V

VACCINATED agglutination tests in and influence of febrile conditions on inoculation agglutinins [Dreyer] (27) 1585
diagnosis of typhoid in and vaccination against typhoid [Hage] (50) 66
typhoid and paratyphoid infections in [Labbé] (51) 1825
typhoid in [Tournade] (76) 153 [Bernard] (29) 924
typhoid in agglutination in diagnosis of [Solomon] (66) 1172
VACCINATION after age of 36 [Perrin] (46) 988
and anaphylaxis research on [Bijl] (42) 2044
case appeal lost 42
cholera and typhoid technic and experiences [Bujwid] (54) 695
cholera value of [Ajkay] (69) 1064
combined [Castellani] (19) 150
dysentery [Herer] (110) 928 [Castellani] (12) 1060 [Seiffert] (75) 1359
hay fever [Sormani] (101) 392 (19) 922
municipalities not liable for infection from negligent 531—Ml
neuralgia and other complications of revaccination [Van Wayenburg] (49) 2130
of entire population in Galicia 1397
paratyphoid [Gasperini] (63) 463
practical applications discussion on [Billings Cole] 1741—ab [Hastings] 1742—ab
psoriasis following [Lane] (68) 1166
publications denouncing repression of 204
pustule infection of eye from [Kuhlefelt] (142) 544
pustule protection for [Camus] (47) 151
smallpox [Kenna] (77) 1167 [Gay] (42) 1352 [Vessells] 2121—ab
smallpox acupuncture best method of [Hill] (36) 1165
smallpox, gangrene of arm and back following in adult [Balzer] (16) 2042
smallpox technic for [Hamburger] (116) 992
typhoid [Schofield] (47) 383 [Bliss] (119) 773 [Silvestri] (118) 849 1561
typhoid and cholera [Seiffert] (64) 228 [Hueppe] (51) 312 370 [Wassermann] (75) 540 [Nedrigailoff] (115) 1666
typhoid and cholera scarlatiniform tardy exanthem after [Frieboes] (62) 1064
VACCINATION typhoid and diagnosis of typhoid in vaccinated [Hage] (50) 66
typhoid and immunity to typhoid [Noack] (88) 68
typhoid and paratyphoid by combined method 193—E
typhoid and paratyphoid reaction to [Tonnel] (41) 1748
typhoid and paratyphoid triple [Widal] ([illegible]2) 988
typhoid and paratyphoid years experience with [Mauringe] ([illegible]) 151
typhoid arouses old latent disease [Bardach] (93) 541
typhoid complications of [Akhelzer] (88) 1896
typhoid during 1915 961—ab
typhoid enlargement of spleen after [Hirsch] (71) 66 [Kämmerer] (140) 779
typhoid experimental and inoculation with typhoid [Emmerich] (72) 846
typhoid in forces [Flemming] (2[illegible]) 461
typhoid in Russian army [Tarassevitch] (3[illegible]) 2128
typhoid influence of on seroagglutination and course in typhoid and paratyphoid [Rist] (53) 1825
typhoid lack of protection after reasons for [Nichols] (72) 986
typhoid paratyphoid and bacillary dysentery combined preventive [Johnson] (20) 606
typhoid pathologic conditions after 907
typhoid routine examination of 3 700 patients in institution [Weston] *1089
typhoid since charts showing decline of [Labbé] (53) 776
typhoid typhoid following 123—E
typhoid Widal reaction after [Datta] (88) 1827
typhoid with various vaccines antibody production after [Cröbl] (113) 543
underlying problems of [Smith] 1740—ab
when should one be revaccinated [van Rooijen] (119) 1282
VACCINE ampules apparatus for filling [Davis] (139) 1355
and serums [Clayton] (64) 1659
antigonococcus [Soldevilla] (36) 2044
autosensitized [Wohl] (85) 1582
bacillus dysenteriae attempts to produce safe and effective for prophylactic use in dysentery [Thomson] (11) 1060
bacterial action of on tissue cultures in vitro [Smyth] (55) 919
Castellani s tetravaccine and pentavaccine [Lurie] (4) 536
dysentery preparation of method for [Dean] (2) 1823
from clinical standpoint [Du Bose] (88) 1354
gonococcus provocative test [Asch] (82) 847
iodized against typhoid and paratyphoid [Ranque] (21) 386
mechanism of action of [Luithlen] (103) 1281
mixed treatment with [Thibaudeau] (147) 63
mouse typhoid bacillus in clinical typhoid [Zupnik] (108) 848
newer ideas on [Watkins] (26) 602
nonspecific action of [Jobling] *1753 [Miller] *1756 [Smith] *1758 1784—E
of favus and ringworm [Lavinder] *945
sediment typhoid polyvalent sensitized in typhoid intravenous injections of [Gay] (9) 770
sensitized Shiga and Flexner in chronic bacillary dysentery [Rogers] (2) 460
smallpox diffusion of in organism [Spolverini] (74) 390
stock in bacillus typhosus infection [Whittington] (26) 1535
typhoid 191
typhoid agglutinins in blood of children after injection of [Medovikoff] (82) 1896
typhoid and cholera technic for preparing and administration of [Nedrigailoff] (79) 464
typhoid and foreign protein in typhoid intravenous use of [Miller] (46) 458
typhoid prevention by [Whalen] (140) 1275
typhoid production of immune bodies by [Lowy] (43) 66
VACCINE typhoid sensitized in typhoid intravenously [Gay] 2050—ab
use and abuse of [Spitz] (172) 149
whooping cough [Ivanissevich] (101) 1751
VACCINE THERAPY [Ehret] (69) 772 [Zupnik] (108) 848 [Wood] (28) 1272 [Robertson] (58) 1493 [Hektoen] *1591, 1625—E [Dumke] (110) 1822
acne vulgaris and furunculosis [Fox] *2064
and serotherapy in diseases of eye ear nose and throat [Campbell] (84) 1167
and serotherapy in diseases of eye ear nose and throat report of committee on [Haughey] (74) 772
bacillus carriers [Karell] (77) 1065
based on Mendez biological theory of immunity [Ivanissevich] (102) 697
erysipelas migrans and multiple abscesses in 6 months old infant [Fischer] (46) 1493
hay fever [Strouse] *712
infectious diseases of ear nose and throat [Moss] (157) 1583
iritis [Reber] (121) 1822
otitis media suppurative [Coates] (17) 1351
ozena and asthma autogenous [Klenk] (96) 1659
ozena effectual [Quadri] (131) 156
principles of [Cooper] (90) 1354
pyogenic dermatoses [Dennie] (59) 61
staphylococcus septicemia autogenous [Etienne] (57) 925
streptococcal puerperal infection [Chalmers] (16) 1661
typhoid [di Cristina] (123) 780 [Würtzen] (134) 780 [Waltzfelder] (103) 841 [De Lucchi] (77) 1664
typhoid after prophylactic inoculation [Mayer] (62) 695
typhoid in children [Ortiz] (43) 151
with heterovaccines [Mazza] (126) 780
VACCINIA serodiagnosis of smallpox and [Kolmer] (48) 985
VACUUM flushing leech [White] (28) 457
VAGINA absence of uterus and case of [Warren] (45) 1580
absent surgical treatment for [Montgomery] (70) 1493
artificial gangrene of segment of intestine utilized for by Baldwin s technic [Guggisberg] (127) 155
cancer of uterus and radium in 347 cases [Kelly] 2033—ab
discharge treatment of [Chandler] (140) 149
double uterus and new bloodless operation for correction of [Rockey] (19) 1888
fibroma of sarcomatous degeneration of 10 years standing [Chueco] (73) 464
fungus infection of vulva and [von Herff] (74) 1588
operations on local anesthesia for [Thaler] (50) 1496
speculum modification of old [Hewitt] (125) 1059
VAGINITIS dry powder treatment of [Nassauer] (79) 1280
gonococcus [Kolmer] (25) 146
monilia pinoyi Cast 1910 causing [Castellani] (13) 1747
VAGOTONUS attempts to produce experimentally condition of [Troell] (105) 384
VAGOTONY in soldiers [von Dziembowski] (94) 315
VAGUS and sympathetic divisions of autonomic nervous system in lung tuberculosis antagonistic action of [Pottenger] (76) 458
VARICELLA See Chickenpox
VARICOCELE Decoud s operation for [Del Valle] (96) 2040
VARICOSE enlargement of connected splenic renal and collateral veins [Nakamura] (125) 929
leg ulcers treatment of [Skillern] (38) 689
ulcers of leg and perforating ulcer of foot treatment by nerve operations [Smits] (14) 1888
veins mechanical aids in [Steel] 1270—ab
VARICOSE veins of spinal cord operative treatment of [Elsberg] (2) 1742
veins on leg repeated ligation of [Secher] (123) 317
veins operative treatment of ulcers and based on classification of these lesions [Homans] (113) 605
VARIOLA See Smallpox
VARIX aneurysmal [Bess] (150) 1355
aneurysmal of internal jugular vein and internal carotid artery [Bland Sutton] (9) 986
VARNISH methyl alcohol in brewers forbid 2069—ab
VAS DEFERENS and testis failure of union between [Whiteford] (16) 150
VASCULAR system changes in and bearing on treatment *especially* with aortic insufficiency [Bullrich] (83) 391
VASOCONSTRICTIVE action of serum on coronary vessels of mammalian heart [Yanagawa] (52) 985
VASODILATORS mode of action of vasoconstrictors and with internal hemorrhage [Lubenetzky] (115) 1752
VASOMOTOR disturbances of upper respiratory passages skin reactions excited by bacterial proteids in [Goodale] (11) 770
neuroses clinical phases of [Hartshorn] (88) 1582
summations [Martin] (28) 1427
syndrome functional [Consorti] (110) 849
VASOSTOMY Belfield vasotomy and and vesiculitis [Randel] (107) 1745
VASOTOMY Belfield vasostomy and and vesiculitis [Randel] (107) 1745
VEAL immature as food 820—E
paratyphoid traced to 2 cases [*Hornemann*] *(137) 780*
VEGETABLE oils hydrogenated physiologic properties of [Smith] (93) 148 279—E
VEIN central retinal bilateral thrombosis of [Walker] (144) 385
femoral ligation of in sepsis after wound of leg [Rost] (105) 779
jugular infective thrombosis of lateral sinus and with mastoid abscess [Bryan] (15) 532
puncture of technic for [Godlewski] (42) 844
transplanted to patch lacerated urethra [Legueu] (53) 1587
Varicose See Varicose Veins
VENA CAVA, end to end suturing of, at nephrectomy [Van Bisselick] (92) 1897
VENARSEN 978
VENEPUNCTURE blood collecting by [Thompson] (88) 1892
VENEREAL DISEASES among delinquents treatment of [Sullivan] *95
and marriage laws 1038
as we see them today [McDonagh] (34) 151
at Copenhagen [Lomholt] (107) 1828
campaign against what it demands of hospitals and dispensaries [Davis] (10) *1579*
compulsory hospital treatment as penalty for exposing others to [Blaschko] (50) 694
consulting dispensaries for 1037
control of [Evans] (82) 384
discussion on wording of circular warning against [Letulle] (51) 151
during war at military hospitals in Paris [Gaucher] (38) 1586
in army 2000
in Belgrade 1400
in garrison during war [Chotzen] (68) 1359
insurance companies war on 524
jail *sentence* for women with who permit sexual intercourse [Schaefer] (88) 990
measures to arrest spread of [Balzer] (34) *694*
measures to check spread of report of committee (118) 1752
prevention of in English army [May] (40) 1824
problem and municipality [Goler] (11) *1579*
prophylaxis and treatment of among soldiers [Bodin] (45) 1895

PETROLEUM, Rittman process for 627—ab
  breaking up products of, 627—ab
PHAGOCYTOSIS and connective tissue cells, [Jones & Rous] (47) 224, 1555—E
  of red corpuscles by polynuclear leukocytes, [Schaap & Wolff] (124) 157
PHALANGES, hereditary absence of 1187—E
PHARMACEUTICALS French [Lyonnet] (45) 1786
  specialties, necessity of publishing composition of, 299
  taxation of, inconsistencies of recent French legislation on 558
PHARMACIST, justice to 1822—E [England] 1864—C [Wulling & Cohen] 1934—C
PHARYNGITIS, acute, followed by appendicitis [Bennett] (5) 1291
PHARYNX edema of mouth tongue, epiglottis and due to eating Brazil nut, [Dabney] *1476
  laryngeal abscess [Reynolds] *1475
  ratoid tumor of, [Gonzales] (82) 1670
HASEOLUS radiatus, acid from in polyneuritis in fowls [Pol] (109) 1671
PHENOL and peroxid solutions in wound infection [O Conor] (10) 1433
  excretion in urine of infants including new-born, [Moore] (2) 309
  injection of, for hemorrhoids [Escomel] (68) 1513
PHENOLSULPHONEPHTHALEIN fate of [Kendall] *343 379—E
PHILADELPHIA, a large drug center 1501—ab
  war hospitals and supplies, 1131
PHILIPPINES, insanity in [Goff] 1343—ME
  Medical Associations joint meeting of 1196
PHLEBITIS recurring in domain of inferior vena cava [Roux] (8) 60
PHOSPHATE and alum content of baking powders, 1206
PHOSPHATIDS, new facts about, 125—E
PHOTOTHERAPY, arc light in, [Spitzer] (8) 155
  in Danish sanatoriums, [Begtrup-Hansen] (95) 320
  in gynecology, [Klein] (41) 666
  in pulmonary and bone and joint tuberculosis [Schmidt] (88) 1222
PHTHISIS See Tuberculosis Pulmonary
PHYSICAL education, reorganization of, in public instruction 133
  training program of State Commission 974—ab
PHYSICIANS See also Medicine
PHYSICIANS Albany plan for educating, in military matters 1129
  American at London Hospital 1274
  and certificates of ill health for men eligible for army, 1990—E
  and his ideals, cui bono, [Graves] (104) 490
  and navy in time of war, [Holcomb] *1095
  Belgian aid to 790
  care for dependents of, 1634
  civil, serving in army suggested method for saving practice 1131 1270 1487, 1559 1502 1633 1828
  civilian, in active service 1123—E
  civilian, shall they examine recruits? 1702—E
  committee for medical preparedness 1052
  cost of educating at Columbia University, 1084—ab
  deaths among in England 1642
  deaths of abroad, 297, 472 558, 646 724 791 922, 990 1136 1198, 1274, 1334, 1420 1567, 1642 1710, 1927
  deaths of, 1916, 37—E
  difference between actions on contract for professional and other services, 935—Ml
  duties of in war time 1048—E, 1626—E
  duty of, in accepting military service, 1536—E
  duty of organized medical profession, 1183—E
  English compulsory mobilization of 1486
  English, draft of, 1483—E
  enlisting with provisos, 1918
  ethical, use of secret remedies by, [Foster] 214—C
  father liable on verbal promise to pay for services, 2005—Ml
  fees which physicians may charge, 655—Ml
  French, raise fees, 472
PHYSICIANS German, condemned, 1769
  higher fees charged in England 386
  in British Army, fatalities among, 1917
  in Germany losses of, 472
  in Netherlands 1885—ab
  in 2 years of war [Stassen & Voncken] (33) 1069
  Indian and color bar at a London hospital 298
  liability when 2 physicians are employed, minimizing damages, 307—Ml
  license of validity of proceedings to annul after failure of criminal prosecution, 1284—Ml
  may testify in will contests as to competency of testators 1284-Ml
  Medical Corps of Army as career, [Noble] *955
  medical military information for, 1485 1703
  medical preparedness, 1048—E 1060—ME
  misstatements of, ground for relief for releases 1209—Ml
  mobilization of, 1127—E
  moving to another location after war 1703
  need of young men for regular Medical Corps, 1265—E
  need of young men in Army Medical Corps 1127—E
  not bound by diagnosis of, 871—Ml
  number of medical graduates 924
  offering service with provisos 1559
  on exemption boards, 1990—E
  openings in government service for development and rapid advancement 1048—E
  qualifications of 1 000 for immediate service abroad 1633
  qualifications under draft, 1918
  scientific degrees in organization of health service 1335
  shortage of, in England, 1415
  status of, in draft, 1825
  tax on war profits and 1492
  testimony of, suing after death of patient for services, 801—Ml
  things guaranteed by implication negligence in treating fracture, 1654—Ml
  to assist in registration for military service 1559
  voluntary mobilization of, 791
PHYSIOLOGIC therapy present status of [Levy] 1656—ab
PHYSOSTIGMIN, influence of on vegetative nervous system [Quadrome & Demattels] (70) 1220
PIDAN, an oriental food, 468—E
  Chinese preserved eggs [Blunt & Wang] (58) 66
PIL Cascara Compound Robins 303-P
PINEAL body, hyperplasia of, [Bell] (69) 148
  extract Vineland experience with [Goddard] 1340—C
PINKHAM Lydia E, Compound 389—P
PIPERAZIN and other organic urate solvents, [Hanzlik] (65) 807
PIPETS graduated simple means to make for serologic reactions [Van Riemedijk] (95) 1515
  inaccuracies in size of hemocytometer chambers and [Lyon] *709
PITTSBURGH, successful experiment in tuberculosis campaign, 1484—E
PITUITARY and thyroid meiopragia post-infectious [Dematheis] (78) 1010
  body as regulator of diuresis and specific gravity of urine [Bab] (17) 812
  body function of, case bearing on, [Boyd] *111
  body, growth and structure of, effects of inanition and refeeding on in albino rat, [Jackson] (3) 1143
  body relation of to renal function [Motzfeldt] (40) 224
  body surgery of, [Segura] (76) 1514
  body tumor removal of successful [Hansen] (78) 1880
  disorders sugar tolerance in 853 E
  extract action of on surviving human uterus, [Charteris] (16) 1068
  extract in chronic polyuria 1555—E
  extract in labor present status of [Mundell] *1601
  extract influence of on urinary excretion in diabetes insipidus, [Barker & Mosenthal] 1871—ab
  extract preparations of 1325—E
  extract, spontaneous rupture of uterus following administration of [Wertenbaker] *1612
PLACENTA, chemical composition of [Harada] (77) 815
  function of, some aspects of 554-E
  histophysiology of at different stages of pregnancy, [de Kervily] (40) 1008
  praevia, treatment of, [Wirz] (52) 1218
  retention of, treated by injecting saline into placenta through umbilical vein, [v Bassewitz] (107) 945
  routine examination of 1411—E
  syphilitic difficulty of demonstrating spirochetes in, [Bartholomew] (81) 1945
  transmission, creatinin and creatin in whole blood and plasma of mother and fetus, [Plass] (33) 1289
PLAGUE history of, [del Pont] (71) 1513
  in England 1196, 1928
  in India, 46
PLANT hairs as pseudoparasites [Donaldson & McLean] (26) 405
PLATINUM, patriotism and laboratory practice 1266—E
PLAUT-VINCENT'S Angina See Vincent's Angina
PLEURA and lungs, disturbances in in heart disease, [Vaquez] (18) 880
  drainage of experimental research on suture of bronchus and, [Nielsen] (123) 588
  effusion, largely cholesterol, [Schulman] *1256
  sudden death from nervous phenomena of pleural origin, [Piéry] (43) 1786
  tuberculosis and tuberculous polyserositis, [Ameuille] (37) 1118
PLEURISY in interlobar fissures in tuberculous, [Sabourin] (67) 1350
  relation to tuberculosis, [Pierce] (102) 1066
  tuberculosis, recurring, [Piery] (54) 405
  with effusion treatment in country practice [Canali] (80) 1072
PNEUMOCOCCUS, allergic skin reactions in pneumonia to type strains of, [Steinfield & Kolmer] (48) 1003
  antigenic classification of, [Olmstead] 1504—ab
  brain abscesses in boy of 6, [Condat] (42) 1148
  germicidal action and specific bacteriotropism of quinin and urea hydrochlorid, ethylhydrocuprein and other cinchona derivatives on pneumococci in vitro, [Cohen Kolmer & Heist] (44) 1003
  in case of stillbirth, [Cornell] *843
  infection ethylhydrocuprein in, [Lundsgaard] (84) 1443
  infection experimental, protective and curative value of quinin and urea hydrochlorid ethylhydrocuprein and other cinchona derivatives in [Cohen, Kolmer & Heist] (46) 1003
  infection in African troops, [Boyé & Clarac] (50) 492
  infection pseudomembranous, in nose and throat [Reh] (26) 1439
  infection tardy tetanus after [Maclaud & Lévy] (56) 1293
  influence of quinin and urea hydrochlorid ethylhydrocuprein and other cinchona derivatives on leukocytosis and phagocytosis of pneumococci in vitro [Kolmer Cohen & Steinfield] (47) 1003
  peritonitis case of, [Belgrano] (72) 1788
  pneumonia and types of and serum treatment of type 1 cases [Christian & Alexander] 1941-ab
  types of in infants and children [Mitchell] (94) 1005
PNEUMOCONIOSIS roentgenologic study of [Landis Pancoast & Miller] 1870—ab
PNEUMONIA acute lobar ethylhydrocuprein in [Moore & Chesney] (15) 1505
  acute lobar specific treatment of [Cole] (95) 1005
  allergic skin reactions in to type strains of pneumococci [Steinfield & Kolmer] (48) 1003
  and types of pneumococcus and serum treatment of type 1 cases [Christian & Alexander] 1941 ab
  coagulation time of blood in [Minot & Lee] *545 [Anders] 729—C
  cold air in in children, 36—E
PNEUMONIA digitalis in [Cohn] 143—ab [Cohn & Jamieson] (41) 224
  ether relation to pelvic and abdominal surgery [Darnall] (13) 874
  ethylhydrocuprein in [Chesney] 143—ab, (15) 1505
  influenzal, 8 cases, [Federici] (71) 1220
  lobar rachicentesis for delirium in [Musser & Hufford] *1231
  lobar treatment by other than specific methods, [Fussell] (96) 1005
  nature and serum treatment, [Cole] 142—ab
  percentage of carbon dioxid in alveolar air in patients who are cyanotic [Pearce & Hoover] 1869—ab
  prophylactic inoculation against pneumococcal infection, 1410—E
  roentgen examination in differential diagnosis between empyema and in children [Stewart] (22) 311
  treatment in light of history of medicine [Neuburger] (75) 230
  vagus nerves in [Porter & Newburgh] (29) 147 (10) 2006
PNEUMOTHORAX artificial in acute pulmonary abscess [Tewksbury] *770, (115) 1140
  induced changes in blood picture under influence of [Gutstein] (89) 494
  spontaneous tuberculous, treatment of [Bonsdorff] (91) 319
  ventilation of lungs in, 550—E
PNEUMOVITA 566—P
POISONING accidental septic, death from 485—Ml
  peculiar in construction camp [Albaugh] *1033
POLIOMYELITIS acute, [Comby] (32) 2010
  acute clinical study of 400 cases of [Jahss] *754
  acute colloidal gold reaction of cerebrospinal fluid in, [Felton & Maxcy] *752
  acute compulsory notification of 924
  acute, diagnosis and serum therapy [Amoss] 994—C [Zingher] *817 [Draper] *1153
  acute etiology of, [Mathers] (56) 225
  acute serodiagnosis in, [Kolmer & Freese] (87) 1664
  after care of, [Lovett] *411, *1018, 1247—ab
  antipoliomyelitic serum production of [Nuzum] *24
  antipoliomyelitis horse serum [Neustaedter & Banzhaf] *1531
  astragalectomy in [MacAusland] *239
  bacteriology of 1122—E, [Hektoen] (61) 1663 [Kolmer Brown & Freese] (43) 1943
  bacteriology of cerebrospinal fluid in scarlet fever and, [Gauss] *779
  cause of [Greeley] (6) 1345
  control of 2004—ME
  cultivation and immunologic reactions of globoid bodies in [Amoss] (63) 1435
  disappearing in Ontario 131
  does cerebrospinal fluid from contain specific infective agent [Abramson] *546
  experimental immunity of monkeys to [Rosenow, Towne & Wheeler] *280
  experimental of monkeys, bacteriologic observations in [Rosenow & Towne] (51) 1290
  Harvard Infantile Paralysis Commission for 1916 report of, [Peabody] (42) 1581
  in Scandinavia 1274
  in South America 209 1053
  literature on 55
  neutralization of virus of, by nasal washings [Amoss & Taylor] (60) 1435
  passage of neutralizing substances from blood into cerebrospinal fluid in [Flexner & Amoss] (59) 1435
  Pennsylvania state work in [Dixon] *90
  relation of meninges and choroid plexus to [Flexner & Amoss] (61) 1435
  Schick test in scarlet fever measles poliomyelitis and in normal children [Zingher] (6) 936
  serum treatment of 26 cases of [Amoss & Chesney] (65) 14
  some features in city prevalence [Crasier] *1535

- VENEREAL DISEASES prophylaxis, has propaganda failed, [Holcombe] (70) 604
  - public health measures and, [Snow] *1003
  - *report of Royal Commission on,* 1038
  - reporting of 1615—ab
  - result of closing segregated vice district on public health of Cleveland [Warner] (21) 1492
  - Simpson light in, [Ffrench] (16) 774
  - treatment now and 20 years ago, [Mowry] (32) 1492
  - treatment of, in English army, [Ffrench] (38) 1824
  - treatment of state-aided 1563
  - war and [De Napoli] (88) 1664
  - workmen's organizations and war on 1126
- VENESECTION as therapeutic measure [Lawrence] (31) 918
  - in hot flashes of menopause, [Engelhorn] (67) 67
  - indications for [Theilhaber] (56) 844
  - purgation massage and blistering [Williams] (28) 1661
- VENEZUELA medical practice requirements in 1264
- VENODINE 978
- VENOMER 978
- VENTILATION, 1553—E
  - and heating of British hospitals [Walker] (88) 604
  - mechanical in hospitals [Sutton] (73) 1892
- VENTRICULAR complex of electrocardiogram, [Wilson] (34) 60
- VERMIN See Lice
- VERMONT Medicine new journal, 439
  - state board February report, 2115
- *VERONAL-SODIUM, 117*
- VERRUCA peruana etiology of as deduced from study of asexual stages of bartonella [Townsend] (59) 1744
  - plana juveniles mercury in [White] (96) 148 (49) 1658
- VERTEBRA affections of, in convalescence from typhoid [Lyon] (87) 541
  - caries [Jorge] (34) 2044
  - cervical, fracture-dislocations of, [O Ferrall] (136) 224
  - cervical second, fracture of [O Brien] (27) 457
  - congenital deformities of ribs and report of 4 cases [Hodgson] (19) 381
  - fifth lumbar fracture of transverse processes of, [Brown] (64) 61
  - fifth lumbar of adult in radiography, [Jinnaka] (109) 1752
  - fracture, without cord symptoms, report of cases, [Roberts] (120) 604
  - lumbar, compression fracture of, report of 7 cases, [Sever] (121) 1060
  - lumbar, fracture of and transverse processes, 4 cases [Sever] (18) 1579
  - static insufficiency of objective symptoms of [Schanz] (62) 608
  - syphilis of complicated nerve tissue involvement from [Wholey] *627
  - tuberculosis of, paralysis from [Jorge] (39) 2044
  - tuberculosis of treatment of, [Jorge] (44) 2129
  - tumors of operation for [Key] (142) 156
- VERTEBRATES and herpetomonads, [Fantham] (7) 386
- VERTIGO, [Brose] (70) 841
  - and nystagmus as localizing signs in cerebellar localization [Eppien] (144) 149
  - of gastric or aural origin, [Linossier] (45) 1171
  - of labyrinthine origin following otitis media with cholesteatoma [Emerson] (22) 1351
  - puncture of dura near internal auditory meatus for, [Dean] (28) 1352
- VERUMONTANUM with reference to referred symptoms, [Day] (75) 1274
- VERUMONTANUMITIS, [Price] (145) 310
- VESALIUS and practice of medicine [Lutz] (83) 841
- VESICOVAGINAL fistula, [Smith] (16) 1584
  - fistula, repair of small, [Mayo] (38) 382
- VESICULECTOMY and vesiculotomy, [Schmidt] *157
- VESICULITIS and Belfield vasotomy and vasostomy [Randel] (107) 1745
- VESICULOTOMY and vesiculectomy, [Schmidt] *157
- *VICIOUS circle with chronic disease, necessity for breaking up [Lorenzen] (104) 466*
- VIENNA Institute for study of food problems, 521
  - letter 130
- VILLEMIN'S experimental demonstration of virulence of tuberculosis, 50th anniversary of [Dandouzy] (36) 312 (17) 386
- VINCENT'S angina [Wingrave] (29) 606, [Colver] (62) 1353
  - angina silver nitrate in, [Ramond] (52) 1748
  - infection of middle ear and external canal [Mulholland] (10) 532 [Adam] (13) 922
- VIRGINIA medical news 366 438 520 826 1035 1559, 1864
  - state board December report, 1421
  - state board June report 52
- VIRUSES filterable present status of, [Malbran] (74) 464
  - ultramicroscopic investigation on nature of [Twort] (27) 150
- VISCERA inversion of 3 cases [de Castro] (32) 2127
  - sensibility of, 361—E
  - transposition of, with duplication of left ureter, [Komendantoff] (101) 1666
- VISCEROPTOSIS See Splanchnoptosis
- VISION a psychic process [Straub] (117) 1361
  - conservation of and prevention of blindness, [de Schweinitz] *393
  - conservation of report of American Medical Association Committee on [Allport] 1988
  - defective, influence of on play life of child [Heard] (38) 1272
  - disturbance in caused by denatured alcohol [Eleonskaia] (87) 1897
  - *disturbance of, in diagnosis of brain wounds* [Marie] (46) 151
  - disturbance of, in pregnancy, [Curry] (75) 1493
  - evolution of sense of [Cross] (4) 1168
  - injury from wounds in war [Pöhlmann] (65) 228
  - loss of from retrobulbar neuritis due to accessory sinus disease case reports, [White] (24) 2038
  - neuroses of miners and military service, [Harford] (12) 1169
  - panoramic bilateral lesion of occipital lobes with retention of macular as distinct from [Bramwell] (3) 1276
  - restrictions of with persisting hyaloid artery, [Waardenburg] (99) 392
  - standards used in examination of recruits in British and Continental armies [Paterson] (23) 1893
  - test card, adaptation of to double function [Jackson] (137) 536
  - testing in schools cards for, [Jackson] (94) 986
  - tests for adaptation of, [Wessely] (92) 990
- VITAMINS, [Bertarelli] (59) 1895
  - content of bread influence of milling flour on and use of baking powder 1314—E
  - effect of on body growth, [Shie] (38) 1890
  - new factor in nutrition, [Funk] 1654—ab
  - night blindness in soldiers possibly result of deficiency in, [Weltfeldt] (60) 389
  - solution of pellagra problem, [Wood] *1447
  - what is a 1470—E [Funk] 1650—C
- VIVISECTION and brutality [Maxwell] 560—ab
- VOCAL cord granuloma of [Thomson] (26) 606
  - cord, paralysis of one, plastic operation on thyroid cartilage corrects consequences of [Payr] (40) 66
  - organs of castrated fowls research on [Hosoya] (122) 930
- VOGES PROSKAUER and methyl-red reactions correlation of in colon aerogenes group [Levine] (48) 1273
- VOICE falsetto changing of to baritone, [Hallock] (103) 535
  - psychic mechanism of and emotions [Mott] (2) 224
  - war disturbances in speech and [Gutzmann] (42) 1062
- VOLHARD'S method for estimating chlorids in urine, [Seelman] (60) 1273
- VOLKMANN S contracture, [Harrold] 1491—ab
  - ischemia, case of, [Cohn] (116) 60
- VOLVULUS, [Weible] (59) 458
  - injury to intestine followed by, [Vance] (73) 1659
  - *of hour glass stomach [Barbacci]* (41) 1433
- VOMITING *center action of opium alkaloids on,* [Macht] 2004—ab
  - center production of nausea and emesis by central effect on, 817—E
  - chronic tonus and contractions of empty stomach of infants with congenital pyloric stenosis pylorospasm and, [Carlson] (26) 381
  - experimental investigation on diarrhea and of children [Mellanby] (28) 1893
  - fecal and intestinal and jejunostomy [Bonney] (7) 1746
  - from circulatory disturbances [Bergmark] (103) 1174
  - heart inhibition during [Gann] (40) 532
  - of pregnancy a toxicosis plus a nervous predisposition, [Jung] (60) 845
  - of pregnancy corpus luteum extract in [Hirst] *645
  - of pregnancy etiologic factors of and treatment [Seba] (101) 459 (119) 921
  - periodical with acetonemia [Frølich] (67) 1498
  - sickness of Jamaica [Scott] (1) 2126
  - uncontrollable and swallowing of air cured by suggestion tonics and diversion, [Pizarro] (81) 391
- VULPIAN'S paradoxic tongue sign [van Rijnberk] (111) 70
- VULVA cancer primary 5 cases [Loomis] (77) 773
  - cancroid of cured with Zeller's caustic paste plus silicic acid internally [Reusch] (62) 228
  - fungus infection of vagina and, [von Herff] (74) 1588
  - pruritus [Eyraud-Dechaux] (49) 462
  - pruritis treatment of [Edenhuizen] (82) 1751

W

- WAITERS and cooks, examination of 127
- WAIVER and privilege 1163—Ml
- WALKING exercise of running and 654—E
- WAR See also Army Soldiers Wounded Wounds
- WAR and esperanto, [Yemans] 675—C
  - and health of civilian population, [Boas] (84) 541
  - and human progress 1126
  - and internal medicine [Reckzeh] (55) 313 (72) 539 (82) 610 [Goldscheider] (58) 776 [Reckzeh] (62) 845 (65) 926 (86) 928, [Goldscheider] (62) 989 [Reckzeh] (45) 1062 (54) 1278, (21) 1432
  - and medical profession [Aikins] (170) 63 [Fraenkel] (81) 696 [Benson] (6) 922 1635, 1934
  - and vital statistics 1320
  - Australian physicians and 129
  - British casualties during 587
  - child welfare work in Paris and vicinity during early months of [Pinard] (27) 226
  - diseases bacteriologic experiences with [Aronson] (79) 541
  - effects of on population 1867
  - epidemic diseases during 905
  - *epidemics and importance of contact infection,* [Menzer] (68) 609
  - epidemics bacteriologic experiences in [Aronson] (93) 610
  - epidemics in 1913 Balkan campaign [Böhme] (77) 540
  - epidemics in previous wars and present war, [Möllers] (51) 1278
  - eugenics and, [Dragotti] (80) 1173
  - first year of and physical development of public school children [Kettner] (78) 610
  - food economics and [Campbell] (5) 1431 (28) 1495 (33) 1585
  - influence of on disease, [Rolleston] (22) 461
  - influence on food supply and public health in Germany, [Zuntz] (97) 154
  - innocent bystander in lot of *[Jackson] (87) 1659*
  - lessons from, in regard to organization of army medical department [Hauser] (86) 153
  - lessons in medicine and surgery taught by present European [Powell] (21) 1820
  - losses of University of Paris 129
  - medical aspects of, [Lee] (111) 604
  - medical records of 1935
  - military organization and equipment in present [Fauntleroy] (133) 385
  - nervous strain of on noncombatants [Rénon] (55) 925
  - noninfectious internal diseases in peace and [Mosse] (61) 845
  - notes 44 129, 203 368 439 522 586 667, 751 827 904 968 1037, 1125 1210 1318 1397 1476 1561 1789 1866 1934
  - notes from battle front in northern France [Smith] (6) 1746
  - ophthalmologic service in [Feilchenfeld] (59) 313 [Löwenstein] (99) 451
  - preparedness of medical department for [Fisher] (96) 691
  - psychologic considerations on [Fuchs] (83) 1750
  - public health and [Gottstein] (48) 66
  - racial damage of, 970
  - sanitary service in organization of [v Tschermak] (101) 1281
  - sanitation in East Prussia during 669
  - *University of Berlin losses in* 44
  - zone Belgian medicomilitary notes from [Spelman] (68) 604
  - *zone isolation in [Pancrazio]* (58) 1895
- WART See Verruca
- WARTHOG and nkufu tick association of [Lloyd] (10) 606
- WASHINGTON medical news 42, 286 665 1864
  - state board January report 2114
  - state board July report 298
- WASSERMANN Reaction See Reaction, Wassermann
- WASTE See also Garbage
- WASTES, city report of committee on collection and *disposal of,* [Hall] (10) 58
- WATER analysis standard methods of proposed alterations in procedure for [Bartow] (16) 918
  - at Paso Robles, California, [Myers] (100) 1822
  - bacillus coli in bile compared with lactose bouillon for determining presence of [Obst] (47) 1821
  - bacillus coli in milk and in, number of 1263
  - bacterial counts in examination, [Race] (9) 2037
  - boiling in cirsoid aneurysm [Wyeth] (88) 459
  - bottled 881—ab
  - chemical sterilization of small amounts of [Spitta] (88) 610
  - deep sea injections of radium and *in treatment of* disease, [Park] (90) 1582
  - distilled therapeutics of, [Stephens] (10) 1660
  - emergency wells, [von Scheurlen] (84) 990
  - hot in goiter injections of 833
  - injection of distilled for multiple ulcers [Stephens] (25) 310
  - intake *effect on* nitrogen retention in nephritis [Foster] (7) 305
  - International Joint Commission on Boundary 1204—E 1266—ab
  - mineral therapeutic value of [Parker] (122) 842
  - purification cost of as affected by war, 1313—E
  - purification factors in *1626—E*
  - radioactive natural [Deaderick] (95) 1058
  - rice for trench enteritis, [Lassablière] (23) 1356
  - Saratoga, value of, [Downs] (98) 1822
  - sea carbon dioxid in can it be directly determined by titration [Morgulis] (57) 533
  - sterilization of with liquid chlorin [Kienle] (90) 62
  - supply of soldiers in field 130 [Lemoine] (43) 1748
  - supply pollution of diarrhea outbreak due to, 828
  - supply purification of, [Jordan] *467

QUININ, strychnin and cocain effects on vas deferens, [Waddell] (83) 1212
  subcutaneous injections of, abscesses and eschars from, [Moreau] (33) 1511
QUINTUPLETS, case of [Martin] 1343

R

RABIES See Hydrophobia
RACHICENTESIS absolute determination of intracranial pressure, [Landon] *1540
  for delirium in labor pneumonia, [Musser & Hufford] *1231
  for relief of teething, [Jackson] (14) 1291
  headache following, [Dana] *1017
  in epidemic meningitis, [Riedel] (43) 812
  in infants [Lavergne] (42) 2010
  of fetus during breech presentation to save child, [Costa] (30) 811
  r [illegible] advantages of in epi[illegible] nd other meningitis, (56) 492
  [illegible] bloss] (21) 665
  [illegible] magnesium in blood and [Howland & [illegible]] 1939—ab
  [illegible] treatment of, [Shabad] [illegible]5) 815, (126) 946
  hymusectomy and, [Renton & Robertson] (12) 1147
RADIOGRAPHY See Roentgenography
RADIOTHERAPY combined, [Collin] (116) 1353
RADIUM and punch operation in enlarged prostate [Young] (42) 1662
  applicator for throat [Hanford] *1904
  effects of on tissue growth in vitro, [Prime] (48) 1781
  in cancer [Ewing] *1238, [Forssell] (85) 1443
  in cancer of prostate and bladder [Young] *1174, [Barringer] *1227
  in inoperable cancer of cervix, [Frank] (60) 660
  in leukemia metabolism study during [Knudson & Erdos] (31) 1288
  in leukemia resistant to roentgen ray and benzol [Ordway] (30) 1288
  in surgery [Foote] (34) 1143
  Institute report of 1643
  rays hemolysis by, [Hausmann] (59) 72
  therapy [Moriarta] (6) 398 [Kennedy] (40) 1064
  therapy, effect of roentgen ray and on metabolism in lymphatic leukemia [Murphy, Aub & Means] (29) 1872
RAILWAY accidents, 1544—ab
  duty and liability of carrier of sick person, 1867—Ml
  phase of first aid [Hileman] (111) 1146
  physician, work of, [Willink] (120) 587
RAT as source of infection in infectious jaundice, [Cornet] (68) 1350
RAT BITE disease in France [Roger] (52) 1669
  fever and spirochetes 1482—E
  fever new species of streptothrix in, [Litterer] 1287—ab
RATION of United States soldier, [illegible]—ab
RAWLEIGH'S Golden Cough Syrup and Rawleigh's Ru-Mex Oil, 1864—P
RAYS See Roentgen Rays, Ultraviolet Rays
REACTION luetin in syphilis provoked by agar [Stokes] *1092
  luetin provocation of, in nonsyphilitic patients, [Cole & Paryzek] *[illegible]
  Tuberculin See Tuberculin Reaction
  Wassermann See Wassermann Reaction
RECIPROCITY 54[illegible]
RECRUITS examination of, 1407
  examination of and preparedness [illegible] 1323—E
  examination of under draft 1703
RECTOCOLITIS hemorrhagic, case of [Mathieu & Alivisatos] (51) [illegible]
RECTUM, cancer of pelvic colon and, choice of operative procedure in, [Mayo] 222—ab (33) [illegible]5
  foreign bodies in [Ki[illegible]er] [illegible] 844
  gonorrhea in children, [Stumpke] ([illegible]) 580
  metastases in ovary and of gastric cancer [Castex] (51) 2012
RECTUM, microbic flora in parturient vagina mouth and rectum of newborn [Hymanson & Hertz] (9) 1287
RECURRENT FEVER See Relapsing Fever
RED CROSS alliance of Brazil and United States 990
  ambulance companies, 1920
  American and European war relief 297
  American Army base hospitals and directors, 1919
  American bureau of information of casualties, 1560
  base hospital at Milwaukee, 557
  base hospital offered, 723
  base hospitals American, organized 989, 1487
  British contributions to 297
  Commission to France 1826
  commission to Russia, 1991—E
  German work of central committee 924
  medical service, report of National Committee on 1918
  medical work, report of committee on, 1764
RED mercuric oxid solution of, 799
REED Dr C A. L and etiology of epilepsy [Thom] 1139—C
REFLEX abdominocardiac [Prével] (61) 1070
  coordinated of human lumbar spinal cord [Böhme] (58) 492
REGISTRATION and Medical Reserve Officers, 1632
  for military service physicians to assist in, 1559
  see that your patients register 1559
  war and New York session 1558
RELAPSING FEVER transmission of by lice, [Topfer] (89) 155 [Prüssian] (95) 232
RENNE'S Pain Killing Oil, 565—P
REPTILES and insects on Mexican border [Coughlan] *1549
RESEARCH committee work of, 47
  in medical schools, 1126—E
  medical, and medical schools [Lee Pearce & Cannon] *10[illegible]5
  medical and war 1185—E
RESPIRATION device for use in blizzards 1256—ab
  physiology of capacity of air passages and percentage of carbon dioxid in alveolar air during rest and exercise, [Pearce] (17) 1288
RESPIRATORY and cardiovascular centers effect of carbon dioxid and other substances on [Hooker Wilson & Connett] (21) 1780
  effect of alcohol on and on gaseous metabolism in man [Higgins] (64) 1944
  metabolism in nephritis [Aub Du-Bois & Soderstrom] (28) 1872
  of simple cardiac fatigue [Ricen] *1908
  suction in surgical shock [Porter] (64) 1663
  tract anaphylactic action of cereal grain on, [Turnbull] (23) 223
  tract foreign bodies in esophagus and, [Schlittler] (49 53) 1218
  tract water elimination through skin and in health and disease [Soderstrom & Dubois] (31) 1872
RESUSCITATION by stimulation of accelerators of heart arrested in diastole [Morat & Petzetakis] (44) 1069
RETINITIS of arteriosclerosis and relation to renal retinitis and cerebral vascular disease [Moore] (33) 740
RHEUMATISM, acute artic[illegible]on, [Frenkel] (115) 157 [illegible]
  (69) 230 [illegible] structure of,
  acute articula[illegible] on and refeeddies i[illegible] albino rat, [Jackson] 106 [illegible]43
  acute relation of to renal func[illegible]n [Motzfeldt] (46) 224
  [illegible] surgery of, [Segura] (76) [illegible]514
  [illegible] tumor removal of successful [Hansen] (78) 1880
  [illegible]rders, sugar tolerance in 853-E
RE[illegible]act action of on surviving human uterus, [Charteris] (16) 1068
  [illegible]act in chronic polyuria 1555—E
  [illegible]act in labor present status of, [Mundell] *1601
RH[illegible]act influence of on urinary secretion in diabetes insipidus, [Barker & Mosenthal] 1871—ab
RIC[illegible] preparations of 1325—F
  [illegible] spontaneous rupture of
RICKE[illegible] following administration
RIGGS'[illegible] [Fertenbaker] *1612
  Alveolit[illegible]
RINGWORM of beard, [Muijs] (114) 496
  vaccine, Strickler's 2 cases of trichophytosis barbae cured by, [Engman & McGarry] *543
RITTMAN process of breaking up petroleum products 627—ab
ROCKEFELLER board, work of 989
  Foundation to study tuberculosis at front 1634
  Foundation what it is doing, 922
  Institute war fund of 1416
ROENTGEN rays, another martyr to, 1927
  burn, liability for 1938—Ml
  dark room rubber sink stopper and overflow drain for [Witherspoon] *911
  Diagnosis See Roentgenography, Roentgenoscopy
  effect of radium therapy and, on metabolism in lymphatic leukemia [Murphy, Aub & Means] (29) 1872
  shadow, special type of with chronic gastritis, [Schwarz] (107) 409
  work, barium sulphate in gelatin for [Bensaude & Terry] (35) 1511
ROENTGENOGRAMS alone not evidence 1433—Ml
ROENTGENOGRAPHERS nurses as 792
ROENTGENOGRAPHY in dysentery and other cases, [Holland] (1) 941
  in military surgery present status and importance of [Masserini & others] (50) 1878
  in pulmonary tuberculosis, [Beeler] (65) 488
  necessity of entrusting to medical men 1422
  of gastric cancer and ulcer pathologic reasons for error in, [MacCarty] (25) 875
  of lungs studies in living animals after injection of iodoform emulsion [Waters Bayne Jones & Rowntree] (10) 1505
  of 28 cases of cancer of large intestine [Bensaude & Guenaux] (34) 1008
ROENTGENOLOGY medical [Bertolotti] (66) 1220
  technic and interpretation of findings [Bertolotti] (74) 1296
ROENTGENOTHERAPY and tuberculin in tuberculosis of infants [Combe] (46) 1668
  blood in cancer under, [Stevens] (30) 1580
  cancer prognosis and [Holding] (25) 1288
  in gynecology [Keene] (87) 1508
  intensive of uterine hemorrhage [Seitz & Wintz] (57) 883
  of acne 14 years experience [Le Fevre] (142) 662
  of disturbances left from wounds of brain and spinal cord [Bonnus Chartier & Rose] (40) 1585
  of hopeless malignancy, [Johnston] (29) 1580
  of uterine fibromyomas and hemorrhagic metritis, [Lawrence] 1287—ab
RUBBER gloves, repairing, [Spriggs] 1429—ab
  sponge tissue for closing gap in skull advantages of, [Scandola] (67) 668
  tube left in patient's body competency of evidence 1868—Ml
RUBELLA quarantine for measles and 1058 [illegible]es
RU-MEX OIL Rawleigh's [illegible]agogy
RUPTURE traum[illegible] in vitro [illegible] Cohen & Steinfield] (47) 1003
  peritonitis case of, [Belgrano] (72) 1788
  pneumonia and types of and serum treatment of type 1 cases [Christian & Alexander] 1941 ab
  types of in infants and children [Mitchell] (94) 1005
PNEUMOCONIOSIS roentgenologic study of [Landis Pancoast & Miller] 1870—ab
PNEUMONIA acute lobar ethylhydrocuprein in [Moore & Chesney] (15) 1505
  acute lobar specific treatment of [Cole] (95) 1005
  allergic skin reactions in to type strains of pneumococci [Steinfield & Kolmer] (48) 1003
  and types of pneumococcus and serum treatment of type 1 cases [Christian & Alexander] 1941 ab
  coagulation time of blood in, [Minot & Lee] *545 [Anders] 729—C
  cold air in, in children, 36—E
SALICYLATES effect of on experimental arthritis in rabbits [Fantus Simmonds & Moore] (9) 1505
  in blood and joint fluid of individuals receiving full therapeutic doses of drug [Scott, Thoburn & Hanzlik] (45) 579
  medication practical suggestions in regard to, [Yanovsky] (116) 587
SALIVA infants means to collect [Allaria] (45) 1668
SALIVARY fistula, treatment of following war wounds 1568
  glands and ducts diseased conditions of, [Roy] (26) 65
  glands influence of removal of on secretions of gastric juice [Swanson] (10) 1779
SALOONS comparative freedom of from sanitary regulations 290 E
SALVARSAN, abrogate patent on, 1187—E 1281 [Vanderslice & others] 1203—C [Finney & Walker] 1572—C 1558—E
  and neosalvarsan in syphilis, [Ormsby] *949
  bill to abrogate patent on, 1416
  caution against non neutralized (acid) solutions of, [Schamberg] *1255
  dangers from inadequately treated syphilis under [Lüth] (62) 742
  death after [Wadia] (11) 490
  factors which govern penetration of anilin dyes and into brain [McIntosh & Fildes] (6) 1146
  in double infections tuberculosis and syphilis, [Potter] (4) 222
  in pernicious anemia [Lämpe] (46) 316
  in syphilis controlled by Wassermann reaction [Wilson] (99) 490
  in tabes with optic atrophy 1430
  intradural injection of 1280
  legislation special committee hearing on 1706
  myelitis developing under, [Socin] (21) 70
  preventive treatment of inherited syphilis with arsenobenzol and salvarsan courses for pregnant women, [Cons] (54) 1070
  shortage of 785 E [Gaines] 995—C 1329—E [Johnson] 1428—C
  substitute another death from, 474
  supply of 866 986—E
  toxicity of [Shields] 53—C
SALVARSANIZED and mercurialized serum in syphilis of brain and cord subdural injections of [Nicholson] 1657—ab
  serum standardized intraspinal treatment of neurosyphilis with, [Stoner] *610
SANAPHOS versus sanatogen a comedy of quackery 559
SANATOGEN versus sanaphos a comedy of quackery, 559
SANATORIUM duty owed to hospital or sanatorium patients 801—Ml
SANITARY service economy in 647
SANITATION in Shanghai 46
  of public markets, [Armstrong] *103 122—E [illegible]c
SANTO DOMINGO medic[illegible]ates in, in 1774
SAPROPHYTES in [illegible]tario 131
  [illegible]ance of [illegible]al fluid from con [Otani[illegible] [illegible]cific infective agent,
SAP[illegible]amson] *546
  experimental immunity of monkeys to [Rosenow, Towne & Wheeler] *280
  experimental of monkeys bacteriologic observations in [Rosenow & Towne] (51) 1290
  Harvard Infantile Paralysis Commission for 1916 report of, [Peabody] (42) 1581
  in Scandinavia 1274
  in South America 209, 1053
  literature on 55
  neutralization of virus of by nasal washings [Amoss & Taylor] (60) 1435
  passage of neutralizing substances from blood into cerebrospinal fluid in [Flexner & Amoss] (59) 1435
  Pennsylvania state work in [Dixon] *90
  relation of meninges and choroid plexus to [Flexner & Amoss] (61) 1435
  Schick test in scarlet fever, measles poliomyelitis and in normal children [Zingher] (6) 936
  serum treatment of 26 cases of [Amoss & Chesney] (65) 14[illegible]
  some features in city prevalence [Craster] *1535

WATER tuberculosis bacilli in river contaminated with sewage from health resort [Brown] 2032—ab
  typhoid due to death from was accidental 981—Ml
  typhoid epidemic due to at Santa Barbara [Geiger] (23) 1779
WEATHER bureau and physician [Carpenter] *6
WEIGHT bearing effective by vertebrae [Schanz] (62) 608
  increase [Rose] (150) 63
  tethelin in recovery of lost during inanition [Robertson] *1009
WEIL-KAFKA hemolysin reaction in spinal fluid [Boas] (91) 1174
WEIL S DISEASE cause of discovery of 66—E
  etiology mode of infection and specific therapy of [Inada] (63) 919
WEIZSACKER endowment at Tübingen 1036
WELLS emergency [von Schuerlen] (84) 990
WERDNIG HOFFMAN early infantile progressive spinal muscular atrophy [Bliss] 2035—ab
WEST VIRGINIA medical news 42 202, 1788
  state board November report 1265
WESTERN Supply Company warning against 287
  Surgical Association meeting of 202
WET effects of cold and [Delepine] (4) 310 [Bell] (32) 1579
  nurses Wassermann test for blood serum more reliable than milk for [Merisset] (66) 1827
WHARTON S duct calculi in submaxillary gland and [Mathews] (34) 689
WHEAT embryo dietary deficiencies of nature of [McCollum] (59) 1821
WHEEL litter travois [Reno] (102) 691
WHEY and unfermented milk in infant feeding [Mucklow] (109) 63
WHISKY prescriptions for revocation of license for wholesaling 1577—Ml
WHOOPING COUGH [Benstz] 453—ab (113) 698
  agglutination in characteristics and comparative value in clinical diagnosis [Povitzky] (7) 770
  complement fixation reactions of Bordet Gengou bacillus [Olmstead] (55) 603
  control of measles and [Curtis] (7) 1241
  diathermia in [Ebstein] (101) 779
  intussusception following 2 cases [Depping] (141) 1355
  treatment of [Polozker] (13) 1165
  treatment of with sputum of patients with pertussis [Kraus] (116) 611 [Melfi] (40) 2044
  vaccine [Ivanissevich] (101) 1751
WIDAL Reaction See Reaction Widal
WIGHT bobbin needle forceps [Wight] *273
  retention cannula [Wight] *273
WIFE promising to pay physician insufficient evidence of 2030—Ml
WILL drawn during typhoid fever validity of [Benitez] (77) 1896
WINE of Cardui suits 585 900—E 967 1042—P 1129—P 1215—P 1317 1323—P 1397 1403—P 1476 1480—P 1560 1566—P 1634 1639—P 1713 1718—P 1793—P 1865 1869—P 1933 2007—P 2073—E 2105—P
WISCONSIN medical news 42, 286 366 520 584 665 825 1125 1209 1396 1712, 1864
  state board January report 2115
WISH in manifestation of epileptic type of nervous constitution [MacRobert] (84) 1745
WITNESS physician as expert [Showalter] (152) 606
  psychology of [Münsterberg] 1852—ab
  Roentgen expert [Skinner] (22) 602
WITTENBERG camp 1563
WLADIMIROFF MIKULICZ amputation artificial leg after [Gangele] (47) 66
WOMEN dentists 289
  department store health of in New York City [Mann] (2) 2037
  in industries [Martin] (147) 1431
WOMEN in medical profession [Glasgow] (108) 63
  work of before marriage [Martin] (127) 1822
WOMEN S Medical College and Hospital opened in India 1318
WORD blindness congenital [Whipham] (1) 986
WORKMEN S COMPENSATION ACT 667
  abuse of charity from standpoint of liability companies and [Rightor] (106) 308
  and industrial accidents [Zanini] (91) 231
  and injured employee [Donoghue] (24) 457
  and miners nystagmus 1784—F
  and traumatic hernia and orchitis [Levings] (157) 383
  borderline cases under [Quick] (176) 385
  effects of on medical profession [Crownhart] (134) 987 [Fairchild] (49) 1744
  of Pennsylvania medical questions in [Mackey] (66) 1493 [Schnader] (67) 1493 [Mackey] (99) 1583
  of Wisconsin from viewpoint of insurance companies [Rosenberry] (173) 385
  rheumatism as accident under 1563
WORKS introduces bill calling on Surgeon General Blue to resign as President of American Medical Association 1313—F 1318 2002—ab
WORMS Brazilian endoparasitic nematoid [Travassos] (98) 697
  ova of in flies 899—F
WORTH S muscle exercises and other treatment for strabismus [Walker] (70) 533
WOUNDED See also Soldiers War Wounds
WOUNDED abbreviation and symbols for early care and records of [Cipollino] (102) 70
  after treatment of apparatus for [Alsberg] (84) 610
  after treatment of experiences with [Rumpf] (54) 389 [Strauss] (74) 695
  care of 523
  care of sick and in modern war medical impressions of [Wehrlin] (22) 1432
  carrying of in trenches [Zieglwallner] (89) 314 [Colt] (22) 693
  combined physical treatment for [Fox] (28) 843
  early care of arrangements for [Binet] (32) 311
  French British hospitals for 587
  halting stations for [Pilzer] (115) 611
  lifting of [Mayo Robson] (4) 460
  medical students provisions made for 1126
  mortality of 523
  operations on promptitude in performing urgent 1127
  pensions for crippled and left by war [Chavigny] (22) 386
  rest and moist air in first treatment of [Laroquette] (35) 226
  soldiers recovery and return to ranks 44
  soldiers society for aid to activity of 829
  statistical report of 570 cases treated in American Red Cross Hospital at Kiev Russia [Winn] (73) 604
  surgeons and neurologists in treatment of [Bobbio] (63) 1895
  transportation and care of sick and organization for [Lee] (54) 690
  transportation of adaptation of farm wagons for [Tintner] (81) 230
  transportation of by wheel litter travois [Reno] (102) 691
  transportation of improvised arrangement of dump car for [Partos] (92) 778
  transportation of on Austro Russian front [Tullidge] (86) 1582
  transportation of sledges for 670
  treatment of Turkish from Suez Canal [Madden] (16) 1356
  warming of at first aid posts 443
WOUNDS abdomen [Posner] (72) 609 [Hau] (40) 988
  abdomen in war 369 [Cignozzi] (121) 543 [Gregoire] (40) 1894 [Abadie] (49) 1895
WOUNDS abdomen nonoperative treatment of 1478
  abdomen operations for [Tissérand] (50) 1171
  abdomen penetrating [Smith] (100) 460 [Meyer] (11) 461 [Fraser] (4) 1584 [Sampson] (3) 1660
  abdomen perforation with diagnosis of [Kausch] (53) 539
  abdomen treatment of in field ambulance [Schwartz] (64) 1587
  abdomen treatment of in war [Quenu] (47) 538 [Strauss] (64) 1358 2000
  accidental first aid in [Bloodgood] 758—C
  anaerobes isolated from [Robertson] (24) 1584
  antiseptics for standard methods of testing [Emery] (21) 1661
  antiseptics in action of 522 [Flessinger] (33) 1894
  apparatus for continuous irrigation of in field [Shorten] (11) 1823
  apparatus to aid in overcoming consequences of in war [Riedl] (79) 68 (80) 230
  apparatus to restore functioning after in war principles for [Bum] (80) 230
  articular stiffness and ankylosis after 204
  bacteria of putrefaction and of [Distaso] (27) 537
  baths and ultraviolet rays in [Hufnagel] (74) 539
  biologic study of [Policard] (36) 1747
  bladder in war [Goldberg] (97) 69
  blood vessels and gas gangrene [Heidler] (104) 1281
  blood vessels surgical treatment of 247 cases [Küttner] (70) 926
  bones and joints immobilizing dressings in [Körte] (35) 694
  bones and joints treatment of [Gangolphe] (67) 152 [Böcker] (98) 154
  bones long [Plisson] (40) 461
  bones physiologic removal of splinters of bone and sequesters after in war [Klapp] (93) 991
  brain necessity for immediately protecting with fat and fascia flap [Kaerger] (83) 1280
  brain occipital lobe hemianopsia from [Villaret] (42) 538
  brain visual disturbances in diagnosis of [Marie] (46) 151
  cancer on hand in scar of 67 years later [Melchior] (93) 1359
  cicatrized are shell fragments septic when buried in 1478
  cornea perforating operative treatment of [Eliasberg] (82) 464
  dermatitis around [Desaux] (54) 1586
  diagnosis and record of in war [Lörcher] (55) 389
  disinfectants iodin and sodium hypochlorites as [Schütze] (2) 385
  disinfection and immediate or early union of recent 969
  draining of employment of bandages for irrigation of wound surfaces with therapeutic solutions [Wright] (36) 1277
  dressing [Stewart] (8) 688
  dressing for physics of [Primrose] (4) 922
  dressing modified physiologic serum for [Cruet] (34) 1356
  early closing of with healing by primary intention Carrel s method [Uffoltz] (36) 1586
  ears in war [Hofer] (100) 315 [Canuyt] (32) 1747
  electrotherapy for in war [Grace] (9) 149 [Bertolotti] (58) 463
  epinephrin in local treatment of [Widit] (68) 229
  eyes always bandage both [Weber] (92) 314
  eyes first treatment of [Rotter] (102) 928
  eyes in war [v Grosz] (98) 315
  eyes minor goggles to ward off [Terrien] (23) 386
  eyes multiple due to broken spectacle lens [Murray] (131) 1660
  face 368
  facial paralysis from in war [Moure] (47) 1748
WOUNDS fecal streptococcus obtained from bactericidal effect of ethylhydrocuprein hydrochlorid on [Inman] (12) 386
  feet subject to morbid sweating healing of [Le Tanneur] (35) 311
  fistulas in orbit from in war 12 cases [Bourgeois] (50) 1895
  fistulous tract produced by injections of petrolatum and soft paraffin in 290
  foreign bodies left in abdomen and in [Mann] (142) 149
  gangrenous bacteria of [Dean] (10) 606
  gas gangrene from in war [Guizzetti] (80) 1664
  genito urinary tract in war [Haim] (109) 848 [Stutzin] (50) 1063 (70) 1279
  grazing skull treatment of [Florschütz] (70) 1064
  grenade extensive treatment as for deep burn [Weiss] (76) 313
  gunshot [Richard] (103) 1167
  gunshot abdomen immediate operations for [Murard] (70) 152 [Van Poole] (67) 383
  gunshot abdomen recovery in severe case [Cignozzi] (83) 1173
  gunshot abdomen report of cases [Harmon] (90) 604 [Hays] (118) 605
  gunshot abdomen tabular statement of 500 [Wallace] (21) 1169
  gunshot abdomen treatment of [Mayo Robson] (2) 149
  gunshot and injuries of spinal cord case reports [Collier] (20) 1495
  gunshot and shell abdomen [Cignozzi] (96) 696
  gunshot and shell ankylosis after resection of elbow for [Mouchet] (25) 694
  gunshot and shell fingers [Schloffer] (52) 695
  gunshot and shell hemiplegia from [Guillain] (35) 1356
  gunshot and shell infectious complications of [Lévy] (38) 461
  gunshot and shell jaw lower extension treatment of [Faltin] (141) 544
  gunshot and shell larynx and trachea [Kofler] (109) 611 [Canuyt] (16) 1432
  gunshot and shell nose and vicinity treatment of [Canuyt] (32) 1061
  gunshot and shell of nervous system experiences with [Tobias] (31) 1432
  gunshot and shell of thorax [Rémond] (27) 311 [Piéry] (41) 988
  gunshot and shell of thorax hemopleuro pneumonic syndrome 58 cases [Piéry] (32) 843
  gunshot and shell of thorax treatment of [von Brunn] (52) 66
  gunshot and shell reflex contracture and paralysis after [Babinski] (62) 1172
  gunshot and shell skull later course of [Hayward] (65) 776
  gunshot and shell suppurating management of [Bérard] (69) 1172
  gunshot aneurysm from treatment of [Ball] (12) 1276 [Hauber] (94) 1589
  gunshot auscultation in diagnosis of vascular injuries accompanying [Makins] (19) 1661
  gunshot bacillus aerogenes capsulatus infection in healed [Penhallow] (23) 1747
  gunshot blood vessel lesions from results of report of cases [Makins] (4) 986
  gunshot esophagus [Nuthall] (24) 310
  gunshot eyeball [Stack] (5) 1168 [McReynolds] (138) 1746
  gunshot foreign bodies in bladder from [Turner] (26) 1893
  gunshot gastro intestinal tract operative treatment for [Wallace] (21) 310
  gunshot head [Gray] (22) 986
  gunshot hypochlorous acid in [Miles] (11) 842 [Newman] (10) 1823
  gunshot infected bacterial flora of [LaGarde] (67) 604
  gunshot infected camphor and phenol in [Mosse] (109) 541
  gunshot infected treatment of [Gray] (1) 460

WOUNDS gunshot, joints, ankylosis following, positions of election for [Jones] (1) 1823
  gunshot, knee joint treatment of, [Lockwood] (7) 773
  gunshot, lungs, report of cases, [White] (24) 150
  gunshot, nose, [Wilson] (13) 693
  gunshot, of peripheral nerves, 968
  gunshot, of peripheral nerves operative treatment of, [Schiffbauer] (110) 604, [Cassirer] (53, 61) 1278
  gunshot, of peripheral nerves syndrome of compression case reports [Stopford] (22) 1495
  gunshot, of peripheral nerve-trunks, physiologic treatment of, [Lyle] (109) 605
  gunshot of soft parts, [Greenough] (27) 603
  gunshot purulent infection of, and etiology [Pavloffsky] (126) 930
  gunshot, rectum, colostomy in, [Machavariani] (133) 543
  gunshot shoulder, [Bland-Sutton] (5) 986
  gunshot skull, glancing, [Owen] (33) 1824
  gunshot, skull roentgenography in, [Vilvandré] (6) 1060
  gunshot spine, surgical aspect, [Armour] (29) 1585, [Hull] (4) 1746
  gunshot, superior longitidinal sinus, report of 3 cases, [Nuthall] (7) 460
  gunshot suppurative arthritis due to treatment of 1715
  gunshot thorax, [Bradford] (13) 774 [Boothby] (38) 1057
  gunshot thorax surgical treatment of [Davies] (14) 774
  gunshot traumatic implantation of epidermis in track of [Edington] (6) 460
  gunshot, treatment of, [Moynihan] (9) 1169
  gunshot, upper extremities, Mr Robert Jones on 971
  gunshot, upper limbs, [Delorme] (32) 1170
  hand flap of skin from a finger in repairing [Quénu] (62) 1587
  head [v Brunn] (93) 154, [Reinhold] (12) 1584
  head helmet as protection against 1212 [Roussy] (24, 36) 1356, 1715
  head nervous affections following, in war [Villaret] (31) 1747
  head treatment of, 969
  head treatment of in casualty clearing station [Don] (27) 2127
  healing fibrous tissue formed in origin and structure of, [Baitsell] (13) 2126
  healing in skin of guinea pig quantitative analysis of influence of size of defect on, [Spain] (64) 221
  healing of, effect of war environment on mind and, [Haury] (73) 153
  healing of, military discipline in hospitals as factor in [Hellpach] (104) 154
  heliotherapy for in war, [Laroquette] (28) 65 [Breiger] (53) 228 [Reinbold] (48) 312, [Grangée] (43) 462
  horse serum in treatment of, [Lignières] (29) 65
  hypochlorite sterilization of technic for, [Dehelly] (21) 2042
  ichthyol and glycerin in septic, [Duggan] (29) 461
  immediate treatment of, in ambulance at front, 1399
  in war, [Bowlby] (1) 385, (9) 386 (7) 986
  incapacity from disease or guide for reckoning, 290
  infected and contaminated sugar in, [Hercher] (77) 1360
WOUNDS, infected, antiseptics in, [Morton] (10) 64
  infected baths in, importance of, in war, [Küttner] (74) 1064
  infected Carrel's method for abortive treatment of [Perret] (30) 1747
  infected early closing of and abortive treatment, [Dehelly] (14) 2042
  infected of bones and joints, treatment of [Körte] (51) 844
  infected or doubtful, treatment of, in war, [Chaput] (39) 1277
  infected, quinin hydrochlorid dressing for, [Taylor] (3) 386, [Tweedy] (5) 460
  infected, silver nitrate in [Ingram] (42) 151, [Löblowitz] (91) 610
  infected, treatment of, [Morgan] (7) 2041
  infected, Simpson light in, [Menzies] (24) 1169
  infected sodium hypochlorite in, [Dalton] (6) 693
  infected treatment of [Bérard] (49) 538, [Bertarelli] (55) 1497
  intestines closing fistulas after [Dobbertin] (72) 695
  joints, [Kaehler] (91) 778
  joints, continuous passive venous hyperemia in severe [Sehrt] (88) 1360
  joints, in war, means to restore functioning after, [Meny] (67) 228
  joints passive venous hyperemia in [Linberger] (76) 1359
  joints treatment of in field hospital [Varay] (41) 461
  knee [Delore] (75) 153
  knee in war [Gayet] (37) 1747, [Fasano] (82) 1827
  knee suppuration in gravity of, [Gouverneur] (46) 1586
  leg injury of blood vessel in, localization of point of, [Volkovitch] (104) 1666
  leg sepsis after ligation of femoral vein in, [Rost] (105) 779
  lumbar plexus paralysis from tendon transplantation corrects [Orth] (103) 541
  lungs and tuberculosis, [Rieder] (81) 990
  magnesium chlorid in, utilization of cytophylactic action of [Pinard] (53) 152
  mechanotherapy after double pulley exerciser for in war [Kouindjy] (35) 843
  mouth and jaws chloramin in, [Fisher] (19) 606
  neck venous hemorrhage in, obliteration of lateral sinus to arrest, [Lannois] (68) 152
  nerves experiences with nervous affections and [Tobias] (87) 928
  nerves operative treatment of, [Spitzy] (89) 1359
  nerves retraction of paralyzed muscles after, [Lortat Jacob] (36) 537
  nerves treatment of, [Loewenthal] (58) 1278
  nervous affections due to, in war and pensions [Grasset] (42) 607
  open treatment for secreting superior advantages of, [v Wild] (78) 1359
  opening of and breaking of stitches not covered by accident insurance 836—Ml
  operative treatment of early advantages of, [Zuckerkandl] (60) 539
  petrolatum in large cavities, [Martin] (80) 540
  petrolatum liquefied by heat for dressing and draining [Soresi] (127) 612
  plastic tendon operations and other measures for after-treatment of, in war, [Fischer] (98) 541
WOUNDS, potassium bitartarate plus boric acid for disinfection of, [Cossu] (55) 463
  pseudarthrosis of forearm consecutive to, treatment of, 16 cases, [Nové Josserand] (65) 152
  pyocyaneus infection of, balsam of Peru in, [Bourgeois] (51) 1662
  rectum, perforating cases of, [Waring] (12) 986
  roentgenoscopy of gas and pus infections [Dabis] (76) 2040
  salt solution best dressing for, [Maag] (112) 1066
  scars of treatment of, [Burke] (12) 2127
  seton treatment of, 669
  shattering, decalcification and wasting of bone after, [Pech] (64) 152
  shell chemical factors in, [Hau] (39) 988
  shell from small flying scraps, [Roulland] (34) 843
  shock from, direct intracardial injection in [Szubinski] (56) 389
  shrapnel bullet, [Wickenden] (35) 1170
  shrapnel, right parietal cortex, [Anderson] (30) 537
  sinusitis from, in war, [Guisez] (37) 1495
  skull [Kirchenberger] (101) 928, [Hau] (40) 988 [Velter] (54) 989 [Cernic] (108) 1281 (103) 1360
  skull and brain, from surgical point of view [Vidt] (65) 1659
  skull closing gaps in advantages of in war [Mariau] (45) 1586
  skull fistulas and abscesses after, [Witzel] (68) 1664
  skull grazing, causing motor aphasia and loss of memory trephining, recovery, [Müller] (92) 1359
  skull later course of [Hayward] (47) 844
  skull operative treatment for [Gayet] (39) 461 [Ehrenpreis] (37) 1357 [Allen] (116) 1659
  skull penetrating treatment of [Sargent] (8) 986
  skull, removing splinters of bone after abscesses in brain and, [Perthes] (97) 991
  skull septic meningitis from, followed by aseptic suppurative meningitis, recovery, [Pollcard] (52) 1171
  sodium perborate in, [Bourgeois] (52) 1662
  spastic affections of spinal cord from, radiotherapy in, [Bonnus] (44) 538
  speech disturbances following in war, treatment of, [Froschels] (73) 313
  spine of warfare, [Holmes] (12) 149
  spleen, [Delore] (70) 1172
  spleen stab, [Kolias] (116) 1282
  stab, suprapubic technic for making, [Reder] *272
  sterilization of and immediate closing, [Carrel] (37) 775
  sterilization of skin and iodin fumes for [Bulling] (116) 155
  stomach, fatal without operative treatment, [Böhler] (56) 228
  sugar for dressing, advantages of [Meyer] (115) 779
  sympathetic nerves and vessels, [Meige] (59) 1587
  talipes equinus following decapitation of astragalus to correct, [de Fortunet] (45) 607
  tendons incised treatment of [Dorrance] 1734—C
  testicles, treatment of, [Levy] (71) 1064
  tethelin in healing of [Robertson] *1009
WOUNDS, thigh lacerated hypochlorous acid in, [Miles] (14) 842
  thorax, [Piéry] (42) 1748, [Mallet] (35) 1894
  thorax and lungs, [Lonhard] (78) 777
  thorax, operative treatment of in war, [Gasquet] (48) 1748
  thorax, physical signs and symptoms of, [Howard] 2030—ab
  thorax pleurisy after in war [Gerhardt] (90) 990
  thorax spontaneous evolution and treatment of, [Thévenot] (69) 152
  thorax sputum with old, [Loeper] (75) 1826
  thorax streptococcus and other complications of [Martin] (44) 1586
  thorax treatment of, [Hofbauer] (25) 1432, 1562
  throat, [Ferreri] (115) 849
  torpid treatment of [Debat] (47) 1895
  tracheobronchial glandular lesions mistaken for projectiles, [Weil] (32) 694
  treatment of in war [Munroe] (39) 147 [Soubeyran] (30) 311, 442, [Treiber] (70) 846 [Cheyne] (6) 986, [Saint] (5) 1276
  trophic disturbances with affecting nerves of limbs 829
  urea as bactericide in [Symmers] (25) 150
  urethra, [Litthauer] (38) 694
  urethra retention catheter in [Rothschild] (90) 928
  vision injured from, [Schreiber] (65) 228
  war [McWilliams] *1085
WRIGHT, French Academy of Sciences awards prize to 43
  stain toning" [Lake] (70) 985
WRIST contracture of terminal phalanges and, symptomatic importance of [Davidenkoff] (49) 1434
WRITING concise 136—C
WRY NECK See Torticollis
WYOMING state board October report, 1053

X

XANTHOPHYLL dependence of color of fat on food rich or poor in, 1119—E
X-RAYS See Roentgen Ray

Y

YAWS See Frambesia
YEAST as food, 1390—E, [Wintz] (85) 1580
  food on market not palatable enough to become popular [Schrumpf] (77) 1280
  influence of on elimination of uric acid [Salomon] (84) 1589
YELLOW FEVER, [Macfie] (1) 606 667
  Arneth counts in [Macfie] (15) 1061
  campaign against, in Yquitos, [Romero] (103) 991
  immunity to [Carter] (7) 2126
  in Australia [Cumpston] 1422—ab
  liver failure in malaria and treatment of [Balfour] (29) 2127
YORK Village Maine continuance of health department at, 1392—E

Z

ZELLER'S caustic paste plus silicic acid internally in cancroid of vulva [Reusch] (62) 228
ZEPPELIN raid, 753, 906
ZOLA'S history of Rougon-Macquart family physicians in, [Adams] (16) 1893

Bendix B (96) 154
Bendz H (101) 466
Benedict A. L (76) 1353 (93) 1582
Benedict F G 1424
Benedict S R (44) 1658
Benedikt, M. (78) 68
Benet G, (22) 1165
Bengis R, (51) 1273
Benisty A., (59) 1587
Benitez J J, (77) 1896
Benjamin C C (77) 1659
Benjamin, C E, (89) 465
Benjamin P L 427 (64) 1745
Bennett C, (11) 922
Bennett F D, (4) 224
Bennett J D (44) 603
Bennett L B, (30) 1165
Bennett T J (182) 63
Bennett V B (17) 150
Bensley R R, (2 3) 455
Benson C M (6) 922
Benstz N (113) 697
Benthin, W (122) 155
Bentley F (118) 1168
Bérard L (59 66 67) 152 (45 49) 538 (69) 1172
Beretta, A., (117) 849
Bergel S, (52) 844
Bergemann H (43) 1496
Bergeron, A., (43) 1171
Bergeron J Z *505
Bergey D H (43) 1820
Berg-Hansen C (111) 1066
Bergmark G (100 101 103) 1174
Berkley, H K (28) 59
Berman N (44) 1820
Bernard L (29) 694 (29) 923 (52) *1825*
Bernd L *1619
Bernhard A 891 *1019
Bernheim, B M, (18) 1272 (3) 2125
*Bernstein E J *1304*
Bernstein E P *1092
Bernstein H S *167
Berry F, (51) 985
Berry J, (26) 1747
Berry J McW, *868
Berry V, (88) 841
Bertarelli E, (55) 1497 (59) 1895
Bertelsen A (105) 466
Bertolotti, M., (58) 463
Beruti J A, (100) 1751
Besley F A *345
Bess T (150) 1355
Besse P, (37) 387
Bessou G, (77 79) 1588
Best W H, (72) 1058
Bevan A. D 595
Beveridge J W (135) 149
Beveridge W W (91) 1745
Bey A K (67) 1064
Beyer H. G (87) 1822
Beyer W, (50) 1357
Biach M. (110) 611
Bicalho C, (98) 1751
Bieling R (99) 928
Biello J A, (140) 1355
Bielugin, T H (135) 543
Bierring W L 684
Biesenthal M (59) 147
Biggs H. M. (106) 63
Bijl, J P, (132) 930 (42) 2044
Bijnen A. (125) 1361
Billings F (4) 305 1741
Billings J S (16) 306
Billström, J (135) 612
Binet L (32) 311 (38) 1495
Bing H I (99) 1898
Binnie J F (3) 1742
Birch-Hirschfeld, G V A, (54) 1358
Bird C R, (29) 1272
Birmingham H P (85) 1659
Birtch F W *1672
Bisch L (40) 1662
Bishop L F (126) 63 (107) 921
Bishop R H Jr (81) 62
Bissell F S (4) 1492
Bjerre E F, (131) 1362
Bjerrum O (109) 466 (135) 780
Björkenheim E A (125) 993
Björkman H (97) 1174
Bjørum M V (94) 1174
Black A. D (71) 383
Black C E *218* (88) 773, (89) 2040
Black D, (65) 1581
Black O F, (60) 1821
Blackburn C D (70) 458
Blackwell H B, (86) 1822
Blackwell, M. E, (85) 384
Blackwood, H J, (133) 1355
Blahd, E M. (108) 1275
Blaine, E (51) 458 (76) 1892
Blair, V P, [illegible] 1059
Blaisdell J H [illegible] 1658
Blake E (126) 69[illegible]
Blake F G (59) 22[illegible]
Blanchard R, (13) 38[illegible] (33) 537
Bland M. W (105) 105[illegible]
Bland-Sutton J (5 9 26) 986, (28) 987
Blankenhorn M A *331 (20) 455, (44) 1166 2032
Blaschko A, (50) 694
de Blasi, A (105) 70
Blassberg, M., (62) 389
Blatherwick N R (13) 982
Blech G M (124) 63
Blechmann C (45) 1894
Bles C (122) 317
Blesh A L (48) 61 (110) 921, (145) 1583 (95) 1892
Blind E (103) 610
Bliss C W, (119) 773
Bliss M A, 2035
Bloch (76) 540
Bloch F (66) 695
Bloch L, 837 (40) 1820
Block E G (55) 1166
Block F B (1) 146, *1018
Blodgett S H (39) 1492
Blomfield J (30) 1585
Bloodgood J C (152) 63, *552 (71) 604, 759
Bloom C J, (10) 219
Bloom I N (75) 691
Bloomfield A L (29) 1889
Bloor W R (7) 917 (47) 1057, (95) 1430
Blosser R (134) 1822
Blue R (42) 60 (95) 604 *1899
Blum S (26 27) 146
Blum V (105) 315 (60) 695
Blumenau N P (112) 1361
Blumenthal F (53) 844
Blumenthal W (60) 1278
Blumer G (42) 383 767 1158 (91) *1892*
Blumfeld J, (33) 151
Blythe V, (81) 691
Boardman W W (22) 771
Boas H, (91) 1174
Boas I (84) 540 (105) 541, (66) 609, (76) 777 (64) 845
Bobbio L, (63) 1895
Boccellato S L (155) 1168
Böcker W (98) 154
Bockhorn M (106) 154
Bode, E, (70) 1359
Bodin E, (45) 1894
Boehme G F Jr (142) 63 (99) 223, (81) 1167
de Boer S (139) 156 (85) 465 (109) 992
Boero E A., (80) 391 (129) 780
Bogardus, H. J, (85) 986
Bogdanik J (78) 540
Boggess W F, (77) 691
Boggs R H (15) 1056, (129) 1059 (70) 2040
Boggs T R (68) 61
Bohlen D A (92) 921
Böhler (56) 228
Böhme A (77) 540
Boisseau J (41) 538
v Bokay, J, (86) 778 (59) 1063
Boldt H J, 142 (1) 381 *1000 2033
Bolduan C F *1818*
Bolk L, (5) 455
Bolling, R W (45) 689
Bolton C (14) 225 (23) 1584
Bolton J S *(3) 1276*
Bond A. R (42) 1744
Bond G D, (132) 1060
Bond H E (78) 1745
Bonime E *(78) 986, (133) 1431* (103) 1822
Bonn H K (20) 1888
Bonnefon (15) 2042
Bonnette P (45) 1662
Bonney V *(20) 226 (7) 1746*
Bonnus G (44) 538 (51) 1586
v Bonsdorff M (97) 465
Bookman A (149) 63 (24) 602
Bookman M. R (100) 773
Boone J C 2121
Boorstein S W (41) 680
Boot C W (16) 532
Booth B H (133) 692
Boothby W M (38) 1057
Bordas F (24) 694
Borden D L, (138) 1275 (99) 2041
Borden R P 58
Bordier H (3) 310 (49) 1171
Bordley J Jr (41) 60
Borelius J (143) 156
Borelli G B, (67) 1895
Borgbjærg, A (134) 318
Bosch S E C (49) 694
Boschi G, (58) 1497
Bosio B (105) 1751
Bosworth A W (41 44) 1057
Bouchacourt L (54) 925
Bouchet (38) 537
Boudreau F G (141) 309 (102) 1059 (113) 1275 (127) 1583
Boudreau L (44) 775
Boughton G C (150) 536
Boughton T H *(50) 985*
Bounafous J, 1553
Bourgeois H (51 52) 1662, (50) 1895
Bourland O M (19) 839
Bovaird D (112) 986
Bovée J W (16) 1420 2122
Bowen J T (92) 62
Bowen W S (97) 2041
Bowie J T, (29) 1824
Bowlby A, (1) 385, (9) 386, (7) 986
Bowman D O (38) 603
Bowman F B (8) 1276
Boyd F D (143) 692 (11) 1660
Boyd C M, (18) 1426
Braasch W F (19) 770
Braatz E (87) 610
Bracken H M, 298
Bradburn M, (105) 308
Bradburn W P, (136) 224
Bradburne A A (134) 1660
Braddock, W H, (8) 305
Bradford J R (13) 774 (27) 922
Bradford, W H (96) 535
Bradley, S C (28) 1057
Bradley W N 57
Brady A J (18) 1824
Brady A S (77) 1822
Brady W 49 (121) 459
Brahmachari, R U N (20) 843
Braislin W C (19) 1351
Braisted W C, 598
Bramwell B, (13) 150 (12) 842, (3) 1276 (13) 1892
Brancati, R (36) 1433
Brandau J W (114) 385
Brandt A T, (96) 391
Brandweiner A., (77) 68 (85) 696 (99) 1360
Branson L H, (55) 383
Brant A (15) 1272
Brauer K, (46) 694
Braun L, (103) 315
Braun P, 1553
Braunlin E L (118) 1822
Bray A (121) 536
Brawley, F (158) 63
Bray H A *788
Brayton F A *1921
Brazeau S D (136) 1660
Breed R S (26) 306
Breiger (58) 228
Breinl A (3) 606
Bremer J L (2) 1055
Bresnahan J F (122) 224
Brethes J (73) 1896
Brickner W M 912
Bridge H L (101) 1167
Bridgman E W (70) 61
Briggs H W, (40) 1057
Briggs L V (10) 1819
Brigham F G (37) 1057 (25) 1165
Brinchmann A (128) 318
Brindeau A (57) 1825
Brinke N (47) 2044
Bristol L D (105) 536, *1678 (53) 1890
Brix (58) 389
Broad G B (141) 149
Broca A (37) 312 (41) 844
Brochet (54) 151
Brock G W (72) 1582
Brodhead G L (75) 1353 (134) 1431 (41) 1492
Brodrick R G (119) 149
Brodzki (63) 1749
Bromer R S (6) 982
Bronfenbrenner, J, (43) 1428, (44) 2039
Bronner H (76) 1274
Brooke J A (113) 921
Brooks B T *24
Brooks C (20) 983
Brooks H (12) 305 (103) 1583
Brooks P B *1445
Brösamlen O (79) 1750
Brose L D (70) 841
Brown A, (48) 383
Brown B H, (64) 841 (86) 1354
Brown C P (64) 1581 (130) 1746
Brown E B (142) 1275
Brown E D (52 53) 1658
Brown E V L, (72) 920 (19) 1743 **1840*
Brown C E **1918*
Brown G V A (13) 381
Brown J E, (96) 1058
Brown J R (146) 149 (127) 459
Brown L (137) 842 2032
Brown L T (64) 61 (22) 1657
Brown M M (43) 918
Brown O W (66) 1659
Brown P K *793
Brown, P M (131) 149
Brown R, (27) 1579
Brown R H (54) 841
Brown S (59) 383 (59) 985
Brown S H (116) 148 (109) 459, (127) 1660
Brown T H (20) 1824
Brown W H (45) 1352
Brown W L (29) 987 (130) 1746
Brown W M (4) 688 2122
Browne, W W, (24) 689
Browning A W (160) 310
Browning C H (4) 2041
Browning W (60) 2040
Bruce, S E (155) 224
Bruère, S (24) 694
Bruhne C (100) 848
Brun H. (73) 1587
Brundage, H. M (136) 309
Brunk O C, (155) 63
v Brunn, W, (52) 66 (93) 154
Brunt, E H, (1) 921
Brush, F L, (77) 604, 916
Brush N D, (67) 61
Bryan, C W G (17) 460, (15) 1404
Bryan, J H., (15) 532
Bryan R C (35) 984 (113) 1059
Bryant, J (20) 1165
Bryant W S, (25) 606, 1811
Bryce P H, (81) 384 (113) 773
Bubb C H (25) 986
Bubis J L (22) 1427
Buchanan R M (21) 608
Buchheim E (45) 388
Budden, C W, (34) 1661
Buddy E P 2119
Buees P, (125) 155
Buerger, L (17) 146
Bufford J H (59) 61
Buford C G (114) 1745
Bujwid, O, (54) 695
Bulkley, L D (62) 985
Bull C G, (65) 919 (52) 1580
Bull L B (36) 1824
Bull P (133) 612
Bullard, H H (1) 455
Bullard, W N (46) 306
Bullen S S (110) 1583
Bulling A., (116) 155
Bullock F D (72) 691
Bullock W E (15) 64
Bullrich R A. (83) 391
Bulson A. E, Jr (73) 384
Bum A., (86) 230 (65) 1358
Bunting C H 2031
Bunts F E (130) 309
Bunzel E (66) 695
Bunzell H. H (35 36) 771
Burch L 1347
Burckhardt O (47) 312
Burdell W J (92) 1354
Burdick W (31) 1579 (90) 1745
Burge E L *998
Burge W E (29) 381 *998 (4) *1819*
Burger H, (133) 930 (47) 2129
Burgess, A M *82
Burgess J L (142) 1746
Bürgi E (75) 1587
Burl R (55) 1895
Burk W, (57) 228 (28) 1432
Burkard O (112) 928
Burke C B (117) 148
Burke N H M (12) 2127
Burkhardt L (47) 1580
Burlingham L H (126) 149
Burmeister W H. (69) 61 *164
Burnam C F 214 2033
Burnand, R (74) 1172
Burnett S G, (86) 384
Burnett T C (55) 1580
Burnham, A. C (48) 1493
Burns, L J (23) 1351
Burns T M, (116) 1583
Burns W B, (119) 1431
Burr A H., (57) 458
Burr C W 380 (80) 1058
Burres W F, (24) 1492
Burres W T (14 15) 2037
Burrow, T *783
Burrows E C (111) 63 *871
Burrows W F (111) 63 *671
Burton, F R, (74) 1822
Burton Opitz R (6) 1819
Busalla (74) 313
Busbee O D (161) 310
Busch P W C M, (49) 2129
Buschan (74) 777
Bush A D, 1155
Bussey W J (48) 1744
Buswell H C, (125) 536
Butler, C S, (130) 385
Butler, G F (57) 841
Butler, J, (62) 1745
Butler R 1271
Butler T H (39) 60
Butsch J L (128) 309
Butterfield E E (8) 305
Buytendijk, F J J (122) 1361
Buzzo A (72) 464
Byford H T 303 (51) 841
Byrd H (51) 147
Byrne W D, (111) 148
Byrnes C M (18) 1820
Bythell W J S, (1) 1355

C

Cabot H 1739 (21) 2038
Cabrera R (130) 612 (131) 780
Cacace E (41) 2044
Cadbury W W *887
Cadenat F M, (41) 226, (58) [illegible]

- TETANUS antitoxin, intramuscular vs. intrathecal route, [Bruce] (15) 1785
  - antitoxin, intrathecal route for [Andrewes & Horder] (16) 1785
  - bacilli, are there carriers of? 384
  - cases of [Dean] (14) 1785
  - in British expeditionary force, recent cases of, [Leishman & Smallman] (14) 739
  - intravenous magnesium sulphate in, [Cammaert] (108) 1074
  - passive immunity conferred by prophylactic dose of antitetanic serum [MacConkey & Homer] (16) 941
  - serotherapy in, curative value of, [Merle] (36) 315
  - tardy [Doberer] (87) 944
  - tardy after pneumococcus infection, [Maclaud & Lévy] (36) 1293
  - treatment comparative value of methods, [Gibson] (1) 222
  - with secondary multiple neuritis, [Richardson] *1611
- TETANY and functions of parathyroids, [Paton & others] (6) 1784
  - calcium and magnesium in blood in rickets and [Howland & Marriott] 1939—ab
  - duodenal ulcer and, [Bine] *1315
  - fatal in young man, [Kjølstad] (88) 1443
  - latent, falling of hair as sign of, [Bolten] (133) 947
  - [illegible] ive, influence of horse [illegible]athyroid gland substance on, [illegible]envers] (115) 1012
- [illegible] medical news, 295, 921, 1134, 273, 1419 1926
  - state board June report, 1649
  - state board November report 997
- THACHER'S Liver and Blood Syrup, 213—P
  - Medicine Company 651—P
- THE-BEST Cough Remedy, 651—P
- THEOBROMINE 121
- THEOCIN in nephritis or cardiorenal disease, 1047—E
- THERMOZINE, 1498—P
- THIGHS, deep veins of pain caused by dilatation of, [Keith] (22) 227
- THOMPSON-KOCH CO opposes Formula Disclosure Bill 795—P
- THOMPSON Malted Food stock plan, [Grant] 1278—C
- THOMSEN'S DISEASE See Myotonia Congenita
- THORACOTOMY in hemorrhage resulting from wound [illegible] thorax, 1643
- THORAX, intrathoracic aneurysm, report of cases [Fenton] (9) 880
  - method for fixation of, [Brams] (105) 1290
  - operations differential atmospheric pressure and intratracheal insufflation of air for, [Giertz] (92) 816
  - simultaneous measurement of both halves of [Perrin] (60) 1070
  - wounds is thoracotomy indicated to arrest hemorrhage resulting from, 1643
  - wounds treatment of empyema following, 1567
- THORIUM in pyelography, [Burns] *533
  - nitrate, 1817
  - sodium citrate solution 1817
  - sodium citrate stronger solution, 1817
  - solution for pyelography, H W & D, 1817
- THROAT affections treatment by nonspecialist of [Got] (11) 69
  - Connellan-King diplococcus infections [King] *91
  - mycosis of, [Basile] (57) 1513
  - pseudomembranous pneumococcus infection in nose or [Reh] (26) 1439
  - radium applicator for [Hanford] *1904
  - septic sore, and beta hemolytic streptococcus, [Smillie] (52) 225
  - septic sore epidemic from infected milk [Henika & Thompson] *1307, [Rosenow & Hess] *1305
  - ulcerative sore, treatment of, [Raymond] (58) 406
  - vaccines in diseases of [Coates] *162
- THROMBIN and prothrombin in blood serum, [Casser] (3) 804
- THROMBO - ANGIITIS obliterans, conservative treatment by Bier's hyperemia suction apparatus, [Sinkowitz & Gottlieb] *961
- THROMBOPHLEBITIS primary, of hepatic vein [Brill] 1940—ab
- THROMBOSIS of cerebral sinuses and veins as complication of *puerperium*, [Hunt] (40) 1873
- THUMB, carpometacarpal articulation of, complete forward luxation of, [Berry] *190
  - sign of ulnar and median paralysis, [Descoust] (34) 1216
- THYMOL in uncinariasis, [Washburn] *1162
- THYMUS and thyroid treatment, effect of, on goiter [Halverson, Bergeim & Hawk] (6) 64
  - extirpation of, in guinea-pig [Park] (45) 224
  - functions of, [Tongu] (81) 1514
  - hypertrophy of, [Gismondi] (65) 668
  - reactivated case of thymic myasthenia, [Hoxie] (12) 1505
  - tumors in myasthenia gravis, [Bell] (70) 807
- THYMUSECTOMY and rachitis, [Renton & Robertson] (12) 1147
- THYROID See also Goiter, Parathyroid, Thymus
- THYROID abscess 3 cases of, [Lahey] (50) 400
  - alleged detoxicating power of, [Basinger] (63) 660
  - antitoxic action of in uremia [Rémond & Minvielle] (52) 1349
  - autotransplantation and hemotransplantation of, using thyroid capsule as seat of transplantation [Hess & Strauss] (8) 1505
  - extract effect of, on catalase content of tissues, [Burge & others] (8) 2006
  - extract in neuroses, [Blanc] (79) 1351
  - extract in uterine hemorrhage, 1058
  - extract of thymus and effect on goiter [Halverson Bergeim & Hawk] (6) 64
  - *insufficiency oculocardiac reflex* with and under thyroid treatment, [Petzetakis] (16) 654
  - postinfectious thyroid-hypophysis *meiopragia*, [Dematheis] (78) *1010*
  - resection of, [Pool] (78) 580
  - rôle of parathyroids and in uremia [Rémond & Minvielle] (41) 1585
  - secretion influence of on standard metabolism, [Krogh] (130) 588
  - studies on, [Edmunds] (14) 1147
  - tuberculosis of, [Mosiman] (140) 1875
- THYROIDECTOMY partial, influence of in pigs, [Palmer] (8) 1001
- TIBIA congenital pseudoarthrosis of, correction of, [Serafini] (102) 495
- TISSUE cells, connective and phagocytosis [Jones & Rous] (47) 225 1555—E
  - growth and tumor growth, [Loeb] (50) 1781
  - growth in vitro effect of radium on [Prime] (48) 1781
- TOBACCO smoking and blood pressure, [Thompson & Sheldon] (97) 808
- TONGUE as mirror of stomach in achylia and pernicious anemia [Faber] (110) 1590
  - blastomycosis of [New] *186, [Weiss] 391—C
  - edema of mouth pharynx epiglottis and due to eating Brazil nuts, [Dabney] *1476
  - tuberculosis of [White & Marcy] (67) 1663
- TONSIL and nasopharynx infections and general systemic disorders, [Crowe Watkins & Rothholz] (28) 659
  - Chvostek's sign and diseases of [Pulay] (100) 156
  - mixed tumor of [Quarella] (31) 1441
  - more conservatism with [Enfield] 1501—C
- TONSILLECTOMY current views regarding 851—E [Higginbotham] 930—C [Dillon] 1057—C
  - during course of acute rheumatic fever, [Morris] (84) 401
  - immediate in incipient acute endocarditis *of tonsillar origin*, [Fleischner] (19) 937
- TOOTH See also Teeth
- TOOTH, molar, sign of inherited syphilis, [Sabouraud] (36) 1511
- TORSION spasm, anomalous, case of, [Dercum] (69) 1782
- TOURNIQUET anesthesia under influence of [Petroff] (123) 946
  - inflatable rubber tube, [Calo] (79) 1588
  - nerve blocking between [Sievers] (76) 1010
- TRACHEA, wounds of larynx and, treatment at time and later, [Moure & Canuyt] (65) 1010
- TRACHOMA in Amsterdam, 1768—ab
- TRANSPLANTATION See also Grafts
- TRANSPLANTATION of fascia into visceral defects, [Neuhof] (109) 1437
  - of fat in prostatic and kidney surgery, [Koll] *536
- TRAUMA and locomotor ataxia, [Terrile] (94) 945
  - and tuberculosis, [Orth] (70) 72, 385
  - and tuberculosis speculation as to cause of condition not tolerated, 1433—Ml
  - neurosis due to, [Oppenheim] (55) 742
- TRENCH FOOT See Foot, Trench
- TREPONEMA Pallidum See Spirochaeta Pallida
- TRICHINAE in pork and nematodes in butterfish [Stiles] *685
  - spiralis, effects of radiation on development of [Tyzzer & Honeij] (49) 939
- TRICHINOSIS in Italy, [Volpino] (62) 1295
  - report of 3 sporadic cases, [Hempelmann] (69) 1004
  - warning against 198—ab
- TRICHOPHYTOSIS barbae cured by use of Strickler's ringworm vaccine, 2 cases of, [Engman & McGarry] *543
- TRICRESOL and chloroform, comparison as preservative in antimeningitis serum, [Neal & Abramson] *1035
- TRIFACIAL foramina osteoplastic closure of, report of cases [Horton] (44) 1346
- TRINITROTOLUENE poisoning, 298, 459—T, [Martland] *835
  - poisoning blood changes in, [Stewart] 1810—ab
  - workers, toxic jaundice among, 1270
- TRIPIER legacies 647, 922
- TROPICAL medicine, new course in at University of the Philippines, 646
- TROPICS diet in, [Ruiz] (94) 1073
- TRYPANOSOMES and tsetse flies, [Tiechmann] (58) 230
- TRYPANOSOMIASIS, Brazilian, 552—E
- TRYPSIN fate of, in stomach, 554—E
- TSETSE Fly See Glossina Mortisans
- TSUTSUGAMUSHI disease etiology of [Ogata] (100) 1589
  - nymph and prosopon of [Nagayo & others] (37) 578
- TUBERCULIDS in infancy and childhood frequency of and relation to prognosis [Hempelmann] (16) 2007
- TUBERCULIN and radiotherapy in tuberculosis in infants, [Combe] (46) 1668
  - hypersensitiveness to, as determined by intracutaneous injection of different dosages [Cohen] (42) 1003
  - reaction, immune reaction to tuberculous infection [Weil] *972
  - skin reaction modification of after repeated application of test [Lindberg] (125) 158
  - therapy in diagnosis of tuberculosis, [Viton] (110) 946
  - therapy modified method in, [Meyer] (90) 489
  - *value of von Pirquet reaction* 214
- TUBERCULOMA of cerebrum and spinal cord report of case, [Ash] (2) 1872
- TUBERCULOSIS American Review of 1052
  - and diabetes mellitus association between [Cohen] 1869—ab
  - and life insurance, [Thompson] (95) 661
  - and panel system 647
  - antituberculosis institutions in Gironde Province before war and at present, [Arnosan] (31) 1216
  - arc light in skin tuberculosis, [Spitzer] (75) 155
  - bacilli, granules of [Sorley] (4) 1665
- TUBERCULOSIS bacilli in feces, detection of 1430
  - bacilli in feces of children with tuberculosis of air passages, [Leffler] (126) 588
  - bacilli in sputum isolation of, and determination of type, [Wang] (13) 1147
  - bacilli in urine, [Humbert] (42) 1217
  - bacilli, passing of, [Friedman] 501—ab
  - bacilli reaction *of*, to sperm oil and its constituents, [Miller] (24) 1007
  - bacilli tissue reactions to various products *of*, [Morse & Scott] (83) 401
  - bacilli, types of, in cervical and axillary lymph gland tuberculosis [Griffith] (18) 809
  - bladder iodin fumes in, [Baradulin] (99) 1671
  - bone and joint [Griffith] (18) 1147
  - bovine infection in children incidence of, [Wang] (6) 1215
  - *breast, bilateral, case of*, [Gilberti] (75) 73
  - calcium in blood in, [Halverson, Mohler & Berheim] *1309
  - campaign against, in France, 859, 989
  - campaign, what is being done in southwestern France [Arnozan & Leuret] (31 32) 1216
  - carriers segregation *of*, 1309—ab
  - chemotherapy in, [Lewis] (33) 938 (1) 1660
  - Committee of Cincinnati acts for preparedness, 1270
  - conjugal of genital organs, [Shelli] (5) 2009
  - conjugal rarity of, [Fishberg] (13) 936
  - diet in, with regard to war conditions, 862
  - during war from standpoint of social insurance [Reche] (62) 867
  - etiology and prevention *of*, from sociologic point of view, [White] (9) 222
  - experimental in mice, experiments on rôle of lymphoid tissue in resistance to [Taylor & Murphy] (66) 1582
  - experimental, treatment of, in guinea pigs and rabbits by taurin, gold chlorid and sodium oleate, [Takeoka] (84) 1145
  - formation *of* giant cells in, [Warren] (54) 1943
  - Framingham experiment, an organized effort at community control of disease, 999—ME
  - gland index in, [Lankester] (13) 404
  - glands of neck new incision for radical resection of [McIlvaine] *1177
  - heliotherapy in [Shortle] (107) 1066
  - heliotherapy *in of bone and joint* [Campbell] (20) 899
  - hemoptysis in [Alfaro] 699—ab
  - home treatment results *of* 1815—ab
  - immune reaction to tuberculous infection, [Weil] *972
  - in Canada, 45
  - in children [Moor] (64) 1346
  - in children detection and treatment of [Hollos] (88) 494
  - in Finnish province, [Cranfelt] (102) 886
  - in hospitals in France, [Leuret] (32) 1216
  - in infants treatment *of*, [Combe] (13) 663
  - in soldiers common *forms of* 1492
  - incipient sciatica zona and skin affections as signs of, [Raymond] (58) 1949
  - infectiousness of, [Webb] (106) 1066
  - *kidney 1910—T*
  - kidney and bladder clinically cured without operation, [Dillingham] (23) 1002
  - kidney is it ever curable? [Halle] (58) 1586
  - kidney, unusual case [Thomas & Birdsall] (36) 1662
  - League of Pittsburgh 1484—E
  - mesentery glands report of cases, [Jones] (12) 874
  - natural and acquired resistance to, [Smith] *669, *764
  - occurrence in of scars *from* tuberculous cervical adenitis, [Wang] *1963
  - phototherapy of in Danish sanatoriums [Bentrup Hansen] (95) 320

Wyler J S, (28) 918
Wyman M H (155) 310, (94) 1354
Wynkoop, E J, (126) 309

Y

Yager N T, (86) 223
Yakimoff V L (127) 850
Yamagiwa K, (108) 1751
Yamashita (31) 461
Yanagawa H (52) 985
Yankauer S (108) 692
Yaple W D (14) 1579
Yarbrough J F, (139) 1583
Yater C M (98) 921
Yates J L (25) 771 2031
Yates W N (102) 459
Yeager C P (136) 1060
Yeardley, N P *650 (149) 1355
Yearsley, M (33) 1661 (1 4) 1892
Yemans H W 675
Yokomori K (94) 1665
Yorke W (5) 2041
Yoshida S (54)) 1744
Young A D (135) 460, (100) 1892
Young B (102) 604
Young E B, (21) 1057
Young H H, (138) 692
Young J H, 57
Young J K, (135) 1168 1271, (13) 1351
Young W G *351
Younger C B (53) 221

Z

Zaaijer J H (118) 1282
Zachariae P (50) 2130
Zadek J, (41) 1357
Zaloziecki A (37) 694
Zannini M (91) 231
Zapelloni L C, (113) 310
Zapffe F C (27) 689
Zarate, E, (38) 2044
Zaun, G F (157) 385
Zederbaum A (45) 147
Zeeman, W P C (107) 992
von Zeissl M, (54) 844
Zemp E R (121) 1275
Ziegler, A, (33) 387
Ziegler, C E (7) 381
Zieglwallner F (89) 314
Zigler, M (132) 63
Zilva S S (9) 1355
Zimmerman, G E (63) 1745
Zingher A. (104 105) 1167, (3) 1351, *1617 (1) 2037
Zinke E G, (59) 1353 (71)
Zinsser H, (59 61) 919
Zislin, (14) 1432
Zitronblatt, A Y (126) 850
Zlocisti T, (62) 1358
D Zmura, A. P (147) 536
Zobel A J, *496
Zoeppritz H, (79) 846
Zondek H, (36) 68
Zsako, S (87) 847
Zuber, (57) 925
Zucker (73) 695
Zuckerkandl, O, (60) 539, (82) 696
Zuelzer, G, (69) 609
Zulick J D (12) 1056
Zuntz N (97) 154
Zupnik L, (108) 848
Zweig, W, (110) 543

INDEX TO PAGES

OF THE JOURNAL, ACCORDING TO WEEKLY ISSUES—VOLUME LXVI, JANUARY—JUNE, 1916

Pages	No	Date	Pages	No	Date	Pages	No	Date	Pages	No	Date
1- 70—	1	Jan 1	545- 612—	8	Feb 19	1067-1174—	15	April 3	1591-1666—	21	May 20
71- 156—	2	Jan 8	613- 698—	9	Feb 26	1175 1282—	16	April 15	1667-1752—	22	May 27
157- 232—	3	Jan 15	699- 780—	10	March 4	1283 1362—	17	April 22	1753-1828—	23	June 3
233- 318—	4	Jan 22	781- 850—	11	March 11	1363-1434—	18	April 29	1829-1898—	24	June 10
319- 392—	5	Jan 29	851- 930—	12	March 18	1435 1524—	19	May 6	1899 2044—	25	June 17
393- 466—	6	Feb 5	931- 994—	13	March 25	1525-1590—	20	May 13	2045-2216—	26	June 24
467- 544—	7	Feb 12	995 1066—	14	April 1						

- URETER, pharmacology of, and action of opium alkaloids, [Macht] (63) 225
  - physiology of vas deferens and, [Macht] (61) 877
  - reestablishing patency of, in pyonephrosis by catheter, [Molony] (176) 403
  - stricture, [Hunner] 221—ab
  - surgery, problems of, [Jackson] 221—ab
  - transplantation of, following traumatism and resection of bladder for cancer, [Judd] 308—ab, (132) 1353
  - transplantation of, into intestines, [Baird, Scott & Spencer] (118) 1437
- URETHRA, diverticulum of, [Englander] *351
  - importance of pari-urethral adenoma with stricture of, [Surraco] (46) 1293
  - instrument to aid retrograde sounding of [Stevens] *911
  - new clamp [Walther] *1696
  - nongonorrheal infections of posterior bladder and rôle of seminal vesicles in [Geraghty] *757
  - occlusion of in treatment of gonorrhea [Dasso] (87) 74
  - persistent discharge from seminal vesicle infections as cause of, [Herbst] *761
  - stricture conception of that admits of scientific treatment [Peterkin] (107) 149
- URIC ACID See Acid, Uric
- URINARY TRACT anomalies of, [Krotoszyner] (30) 1662
  - infections and lymphatics 850—E
  - lymphogenous ascending infection of [Eisendrath & Schultz] *540
- INATION, excessive, at night, 462—E
  - women, frequency of, [Bugbee] *693
- RINE acetone in determination of, [Fittipaldi] (73) 1072
  - acetone in, of acutely insane, [Mills & Wearne] (115) 150
  - acidity of, 931
  - albumin content of, micromethod for determination of, [Delters] (60) 812
  - albumin in, quantitative determination of, [Andresen] (98) 1952
  - alcohol content of in intoxicated, [Widmark] (90) 1298
  - back pressure management of operative cases presenting [Chute] (22) 658
  - bacteriology of, in children with vulvovaginitis, [Schwartz] (4) 1579
  - bile pigments in, [de Jager] (90) 815
  - calcium content of, [Nelson & Williams] (67) 66
  - calcium in, quantitative test for, [Mayer] (66) 1071
  - casts in 198—T
  - chlorids in bedside estimation of, [Achard] (43) 491
  - day and night urine, [Jespersen] (124) 588
  - diastatic activity of feces and, with reference to diseases of pancreas, [McClure & Pratt] (13) 1505
  - enrichment of, with bile for bacteriologic examination, [Trawinski] (101) 586
  - examination of, of sick and wounded soldiers, [Engel] (64) 230
  - excretion, influence of pituitary solution on in diabetes insipidus, [Barker & Mosenthal] 1871—ab
  - excretion of salicyl in of rheumatic and nonrheumatic individuals [Hanzlik, Scott & Thoburn] (54) 876
  - in focal infections bacteriology of and relation to nephritis, [Dick & Dick] (31) 1063
  - incontinence and bladder incontinence in soldiers causes and treatment of, [Fuchs & Gross] (91) 586
  - incontinence in children 1985—T
  - indican in, improved test for, [Askenstedt] (63) 1782
  - indigo red in, [de Jager] (87) 319
  - magnesium and calcium content of normal, [Nelson & Burns] (68) 66
  - parallel study of blood pressure, edema and in pregnancy, [Rosensohn] (39) 659
- URINE phenol excretion in, of infants including new-born, [Moore] (2) 309
  - reflex retention of, [Cecil] *440
  - secretion and blood composition effect of calcium, water and other substances given intravenously on, [Davis] (62) 877
  - specific gravity of hypophysis as regulator of diuresis and of, [Bab] (47) 812
  - substances in, besides glucose, that give positive response to Fehling's test, [Pi Suñer] (100) 1353
  - sugar in blood and, modified micromethod for determining, [Momose] (77) 1442
  - sugar in cerebrospinal fluid and, test for, [Martini] (102) 945
  - sugar in improved technic for determination of [Vansteenberghe & Bauzil] (37) 1293
  - sugar in, substances interfering with reaction for 568
  - sugar in, test for [Angiolani] (78) 1072
  - tubercle bacilli in, [Humbert] (42) 1217
  - uric acid in quantitative test for, [Angiolani] (48) 1441
  - urobilinogen and urobilin in, of pregnant and nonpregnant women [Barnard] (96) 737
- UROBILIN and urobilinogen in urine of pregnant and nonpregnant women [Barnard] (96) 737
- UROBILINOGEN and urobilin in urine of pregnant and nonpregnant women, [Barnard] (96) 737
- UROBILINURIA, 33—T
- UROLOGY, efficient teaching in lack of [De Meritt] 481—C
- UROTROPIN See Hexamethylenamin
- URTICARIA alimentary, [Pagniez & Radot] (18) 70
- UTAH medical news, 44, 722, 1135, 1194
  - state board July report, 482
  - state board October and January examinations 1936
- UTERUS, action of pituitary extract on surviving, [Charteris] (16) 1068
  - action of several female remedies on strips of [Pilcher] (27) 399
  - angioma of [Boks] (103) 1671
  - cancer and sarcoma in simultaneous occurrence of, [Outerbridge] (4) 1287
  - cancer of cervix, apparent disappearance of, case of, [Ibotson] (23) 809
  - cancer of cervix, inoperable, fatal complications of Percy's cold iron method in treatment of, [Leonard & Dayton] (79) 580
  - cancer of cervix inoperable, radium in palliative treatment of, [Frank] (60) 660
  - cancer of cervix personal experience with [Davis] (59) 1663
  - cancer Percy method in, request for report of results of, [Percy] 340—C
  - cancer radium and roentgen rays in, [Boggs] (28) 1580
  - cancer recent progress in treatment of, [Hewitt] (88) 67
  - cancer, surgical treatment of [Jacobson] (12) 398
  - cervix, emergency dilatation of, [Fernandez] (71) 318
  - exploratory curetting of, surprises of [Muret] (26) 811
  - fibroids, sarcomatous degeneration of [Witter] (85) 67
  - fibromyoma and cardiovascular disease, [McClellan] (4) 398
  - fibromyoma and hemorrhagic metritis roentgenotherapy of, [Lawrence] 1287—ab
  - gangrene of, abortive, [Mauclaire] (26) 228
  - hemorrhage, intensive roentgenotherapy in, [Seitz & Wintz] (57) 883
  - hemorrhage, thyroid extract in, 1058
  - hemorrhage zinc chlorid in, [Boldt] 309—ab *832
  - metastatic leiomyosarcoma primary in [Gardner] (44) 1289
  - myomas, myomectomy for [Mayo] *887
  - myomas zinc chlorid in [Boldt] 309—ab, *832
  - perforation with passage of foreign bodies into abdominal cavity, [Beckman] (27) 228
- UTERUS, prolapse and technic of vaginal plastic operations for, [Frank] (137) 402
  - prolapse in nulliparous women, [Findley] (5) 398
  - prolapse, new operation for, [Helmuth] (15) 1433
  - prolapse of vagina and, [Fox] (125) 410
  - prolapse results and technic of vaginal subtotal hysterectomy for prolapse and cystorectocele, associated with fibroid growths [Vineberg] (138) 402
  - pus in, [Chomé] (39) 1008
  - retrodisplacement ideal operation for [Battey] (28) 65
  - retrodisplacement, modified Gilliam operation for results of [Goldspohn] (8) 398
  - rupture following pituitary extract, [Wertenbaker] *1612
  - rupture in cesareanized women, [Bell] (4) 146
  - rupture with sepsis, operation and recovery, [Hall] (3) 146

V

- VACCINATION See also under names of diseases, i e, Typhoid, Vaccination in
- VACCINATION, oral and scarification at State Hospital for Nervous Diseases, [Garrison] *979
  - requirement of in school district justified by conditions in county 1142—MI
  - shock and treatment 1275
  - technic of and course of resulting vaccinia, [Force & Stevens] *1247
- VACCINE immunization, to hasten and intensify, [Camus] (63) 153
  - in diseases of ear nose and throat [Coates] *162
  - sensitized with homologous immune serum effects of, as compared with nonsensitized vaccine [Kakehi] (26) 1007
  - usefulness of serums and, under war conditions [McCoy] *1401, 1413—E
- VACCINE THERAPY See also under names of Diseases
- VACCINE THERAPY possibilities and limitation [Davis] *159
  - present status of [Stone] 1777—ab
- VACCINIA duration and severity of, factors influencing [Force & Stevens] *1247
- VAGINA flora analysis of in late pregnancy [Permar] (8) 1287
  - hernia through [Hartmann] (28) 811
  - parturient microbic flora in vagina mouth and rectum of new-born [Hymanson & Hertz] (9) 1287
  - pharmacology of [Waddell] (69) 1436
  - plastic operations technic of, for cystorectocele and prolapse of uterus [Frank] (137) 402
  - prolapse of uterus and, [Fox] (125) 410
- VAGUS nerves in pneumonia [Porter & Newburgh] (29) 147
  - nerves influence of on fractionate contraction of right auricle, [Wiggers] (25) 146
- VARICELLA See Chickenpox
- VARICOCELE in female [Castaño] (69) 1513
  - pelvic [Castaño] (89) 1151
  - treatment by excision, [Turner] (28) 1947
- VARICOSE veins obliteration of by injection of iodin solution, [Franchini] (115) 410
- VARIOLA See Smallpox
- VAS DEFERENS effects of strychnin cocain and quinin on [Waddell] (83) 1212
  - physiology of ureter and [Macht] (61) 877
- VASOCONSTRICTOR center in brain evidence in favor of, [Ranson] (16) 146
- VASOMOTOR reflexes and afferent spinal paths [Ranson & Billingsley] (17 18) 146
- VEDDER S starch medium, 996
- VEGETABLE Compound Simpson's, 136—P
  - Pulmonary Balsam, 651—P
- VEGETABLES, drying of, 965—ab
- VENA CAVA inferior, recurring phlebitis in domain of, [Roux] (8) 663
- VENEREAL DISEASES campaign against 306—ME 386 [Zumbusch & Dyroff] (77) 494
  - diagnosis and treatment of status of Chicago's hospital and clinical facilities for, [Ormsby] 61—ab
  - in army, 1493
  - in Italian army, 1283—ME
  - in Prussia prophylaxis of, 297
  - in Swiss army [Merz] (69) 1071
  - military measures against alcohol and 1414
  - payment for treatment of, 732—ME
  - problem, 375—E 639—E
  - problem English venereal disease act 550—E
  - problem in Germany, 715—E
  - problem present attacks on problem 784—E
  - problem recommendations of British Royal Commission, 463—E
  - prophylaxis of, [Hecht] (66) 814 1284—ME
  - prophylaxis unit, 1141
  - state and treatment of 46, 298
  - unqualified treatment of, penalized 1275
  - what should Chicago do for? [Pusey] 61—ab
  - what the Chicago health department is doing for, [Tonney] 61—ab
- VENESECTION plus autoserotherapy, [Spiethoff] (44) 316, (82) 408
- VENOM hemolysis after splenectomy, [Kolmer] (34) 578
- VERDICT another contemptuous 137—C
- VERMONT medical news, 45 471, 785
  - state board February report, 1431
- VERONAL, 35
  - poisoning case of, [Fog] (103) 1516
- VERRUGA, Peruvian, [Arce] (62) 317
- VERTEBRAE cervical spondylitis of, [Hnatek] (63) 230
  - upper, gumma and gout involving, [Hnatek] (78) 407
- VERTIGO and vision [Fridenberg] 1337—C
- VESICORECTAL reflex, [Gifford] 304—C
- VESICOVAGINAL fistulas, inoperable substitution of anal for vesical sphincter in, [Peterson] 221—ab
- VIBERT S solution for staining blood cells 391
- VINCENT'S ANGINA affecting troops, [Campbell & Dyas] *1596
  - relation of peridental gingivitis to [Taylor & McKinstry] (13) 1347
- VINEGAR in typhoid and paratyphoid, [Alvarez] (84) 885
- VINELAND experience with pineal gland extract, [Goddard] 1340—C
- VIOLET ray generator Sterling value of in therapeutics 1141
- VIRGINIA medical news, 129, 789, 1194, 1830
  - state board December report 1059
- VISION and vertigo, [Fridenberg] 1337—C
  - requirements of military aviators, [Small] *841 [Blaauw & Small] 1205—C
  - tests for Medical Corps, 1632
- VITAMINS amino acids and other chemical factors in growth of meningococcus, [Lloyd] (21) 1147
  - chemical nature of, [Williams] (57) 1435
  - content of brewers yeast [Seidell] (41) 1064
  - lack of in soldiers' rations biologic and pathogenic importance of [Ramoino] (62) 1950
- VOICE sounds pulmonary variations in [Reid] (23) 1506
  - war injuries affecting speech and [Stangenberg] (101) 1152
- VOLKMANN S ischemic contracture [Kleinberg] *1473
  - ischemic myositis and contracture, [Taylor] (27) 487
- VOLVULUS report of cases, [McKechnie] (40) 1346
- VOMITING continuous treatment of [Grober] (54) 742
  - periodic fatal case of with acetonemia in child [Busacchi] 571—ab
  - periodic in children [Göppert] (73) 744

Vinograd Villchur M (9) 688 (70) 1430
Vintler F X (53) 1434
Virchow H (71) 609
Visanska S A (157) 149
Viton A (132) 780
Vitoux C (42) 1171
Vivian C S (46) 61 (16) 1657
Vogel K M (83) 307 *1012
Vogelius F (61) 1498 (117) 1752
Voghsson J A (25) 706
Voisin R (7[illegible]) 1826
Voislawsky A I (84) 459
Vollansky S A (83) 464
Volkovitch A M (104) 1666
Volland (95) 1280
Volpino C (65) 1895
Von Adelung F *735
Voorhoeve N (103) 232
Voskressensky M K (111) 1361
Vulliet H (46) 312

W

Waardenburg P J (99) 392
Wachenheim F L *1032 (37) 1352
Wachtel H (107) 155
Wacker R. (72) 1587
Wade H W (69) 1273 (38) 2038
Wadhams S H 766
Wadsworth W S (100) 841
Waegell C (82) 153
Wagener H (55) 1663
Wagner G (72) 846 (81) 1280 (72) 1359
Wagner K. (115) 543
Wahl H R. (29) 457 (5) 769
Wahl M (28) 311
Wainwright J M (168) 63
Waite H (30) 461
Waitzfelder E (103) 841
Wakeley C P G (21) 693 (27) 1824
Walcott H. D (117) 921
Walcott W W (38) 984
v Waldheim S (67) 1358
Walker A. (89) 1167
Walker C C. (50) 533
Walker E. (79) 604
Walker E W A. (13) 460 (27) 1585
Walker I C *488 (56) 690
Walker J (6) 1165
Walker J E (129) 1355
Walker J T A. (12) 58 (86) 1058
Walker J W T (29) 1661
Walker M. H. Jr (42) 689
Walker M. M. (134) 1060
Walker R. C (117) 841
Walker S Jr (144) 385 (132) 1660
Walker S F (88) 604
Walker W F (55) 1273
Wall G A. (158) 224 (111) 921
Wall J A (109) 1354
Wall J S 57 *255
Wallace C (21) 310 (21) 1169
Wallace C. H. (97) 1659
Wallace F E. (20) 1820
Wallace G H *397
Waller A D (9) 1660
Wallhouser H J F (65) 1166
Wallis R. L. M (28) 922
Walsh W S (65) 61 (62) 691
Walsham H. (2) 1060
Walter F J (48) 147
Walter W (92) 841 (32) 1056 (130) 1660
Walters C S (171) 63
Walther H W E (113) 1659 (83) 1745
Walton J H (116) 1431
Waltz O H. (86) 921
v Walzel P (97) 1281
Wanless W J (14) 1584
Wanner P (59) 926
Warbrick J C (118) 148
Ward E L (108) 1659
Ward G E S (1) 310
Ward H B (36) 1056 (55) 1744
Warden C C (48) 771
Wardner D M (5) 1656
Waren E. (138) 544
Warfield L M (32) 457 (105) 2041
Warhurst M A. (116) 1275
Waring H. J (12) 986
Warner A R. (84) 62 (86) 604 (21) 1492
Warren E W (42) 603 (45) 1580
Warren M (9) 1426
Warren R (26) 150
Warthin A. S 2032
Washburn F A. (122) 224
Washburn J L (155) 149
v Wassermann A (75) 540
Wasteneys H (51) 1057
Watanabe C K (45) 1057
Watanabe W K (66) 604 (43) 771
Wathen J R (58) 307
Watkins J C (106) 1745
Watkins R (43) 221
Watkins T J (102) 1354
Watkins W W (26) 602
Watson C G (14) 1494
Watson C H (112) 384
Watson E I (146) 1746
Watson F I (110) 1745
Watson J H (26) 774
Watson J J (154) 310
Watson L F (120) 1275 (84) 1353 (65) 1493 (132) 1822
Watson M E (57 60) 1744
Watson W (8) 224
Watterston C (141) 1168
Way J H (144) 1168
Weakley A I (7) 536
Weaver A J (52) 307
Weaver B I (49) 1890
Weaver G H *1448
Weaver J C (58) 1166
Webb F F (92) 1892
Webb C B (30) 221 (56) 1273 (23) 1820
Weber A (76) 846
Weber F (90) 848
Weber O (111) 155
Webster J (12) 1494
Wechselmann W (79) 314 (68) 926 (88) 1589
Wechsler I S *1549
Wechsler L. (91) 459
Weckman A. (99) 465
von Wedel C (108) 1745
Weed L H. (1) 1819
Weekers L (39) 1585
Weeks A (27) 840 *1022
Weeks D F *651
Wegelin C (57) 539
Wehrlin K. (22) 1432
Weibel W (45) 1277
Weible R E (59) 458
Weichardt W (66) 67 (69) 1359
Weidler W B (142) 536
Weidman F D (12) 982
Weil A (32) 694
Weil E. (88) 314 (101) 848
Weil E A (54) 925
Weil P E (50) 988
Weil R (55 56) 221 (73) 691 (43 44) 984 (45 46) 985
Weill G (101) 1589
Weinberg M (7) 1584
Weinberger B W (56) 1493
Weinstein J (109) 536
Weiss A. (102) 1281
Weiss H (76) 313
Weiss M. J (129) 224
Welborn J Y (73) 147 (58) 841
Weller C V (44) 1428
Welles E S (36) 147 (43) 383 (26) 457
Wells C H (113) 1822
Wells D W (17) 220
Wells F C (115) 148
Wells H G (68) 458
Wells S R (27) 1661
Weltmann O (106) 315
Welty C F (23) 771 (31) 1352
Welwart N (71) 1359
Welz A (49) 1357
Wendel J S (92) 1167
Wengraf F (112) 611
Wentworth J A. 2004
Wentworth M. H (25) 457 (28) 603
Wenyon C. M. (14) 64 (26) 226 (11) 383
Werder X. O (5) 146
Werndorff K. R (107) 315
Werneck C (98) 1751
Werner P (72) 229
Wertheim J K. A (7) 1060
Wescott C D *2067
Weski O. (64) 989
Wesselhoeft C (97 99) 1745
Wessely K. (92) 990
Wessler H. (14) 146 (3) 917
West C J (59 62) 533 (37) 771
West M 57 (4) 1165
West S (21) 774
Weston H T (82) 604
Weston P G *507 *1089 (68) 1273
Weston R S (9) 1579
Westphal A (81) 610
Weszeczky O (82) 1280
Wetherill H. G (34) 458
Wetterdal H (116) 698
Wettstein A. (59) 844
Wettstein J C R (56) 147
Were H (131) 930 (100) 1822
Whale H. L. (12) 922 (10) 1746
Whalen C I (44) 221 (24) 1657
Whalen J M (140) 1275
Wheeler C A 977
Wheelock K K (125) 692 (74) 921
Wheelon H (3) 838 (38) 1427
Whiddon R C (128) 1355
Whipham T R (2) 64 (1) 986
Whipple G H (65 66) 221 (36 37) 1427 2031 (12) 2126
Whitacre H J (132) 459 *1614
Whitall J D (116) 309
Whitbeck B H (6) 1055
White A (18) 460 (32) 537
White C J (96) 148 (49) 1658
White C P (29) 537 (50) 918 (11) 2041
White D W (98) 1892
White F W (17) 1657 (36) 1744 (12) 1819
White H S (28) 457
White J T (81) 841
White J A (86) 1167
White L E (24) 2038
White P C (98) 1892
White P D (99) 62 (95) 535 *1383 (54) 1580
White R P (14) 606 (31) 987
White S M (143) 149
White T W (21) 839
White W A. (82) 534 (10) 601 (78) 604 *781
White W C (126) 604 2031
White W H (24) 150
Whiteford C H (16) 150 (15) 986
Whitelaw T H (33) 1579
Whitfield R N (145) 1168
Whiting A. D (18) 1889
Whitman C S (3) 58
Whitney J L *1024
Whittemore A. A. (72) 1167
Whittington T H (24 26) 922 (26) 1585
Wholey C. C. (151) 606 *627
Whyte G D (2) 2126
Wichmann S E (121 131) 993
Wick (86) 1359
Wickenden S (35) 1170
Wickett A D 2004
Widal F (52) 988
Widerøe S (65) 1498
Widmer C (95) 314
Wiener E (116) 543 (113) 928
Wiener J (118) 536 *1078
v Wiesner R R (83) 230
Wietfeldt (60) 389
Wiggers C J (30) 1427
Wight J S *273 (30) 984
Wilbert M I 763 1161
Wilcox H. B (37) 532
Wilcox H. W (24) 1820
Wilcox R. W (84) 1892
Wilcox, W G (116) 986
v Wild C (78) 1359
Wildbolz H (38) 387 (79) 927
Wilder R. M *569
Wilder W H (122) 1822
Wildham H V Jr (100) 223
Wildt A. (68) 228
Wile I S (135) 1431
Wile U J (67) 533, *646 (67) 1353 1880
Wilensky A. O *1382
Wiley H W (136) 1275
Wilhelm F E (82) 841
Wilk S (84) 847
Wilkiemeyer F J (105) 1745
Wilkinson H (54)) 307
Wilkinson M R (83) 1493
Wilkinson W W (25) 602
Willan R J (7) 64
Willard W P (22) 1579
Willcox W H (8 9) 1060 (18) 1061 (26) 1277 (12) 1404
von Willer P (41) 1658
Williams A. H (64) 1429
Williams A W (26) 1056
Williams C B (158) 1583
Williams C F (150) 1660
Williams D H (127) 1431
Williams E. C (3) 64 (5) 773 (3) 1584
Williams F J (2) 219
Williams F R *1384
Williams G H (101) 1059
Williams H B (31) 1427
Williams J T (33) 147 (5) 1165 (18) 1272
Williams J W *1902
Williams L (28) 1661
Williams R. B (127) 605
Williams R R (78) 384
Williams T A. (20) 146 (115) 309 (60) 772 (49) 925 (131 133) 1275 (151) 1355 (38) 1580
Williams W H (111) 384
Williams W W (31) 1579 (90) 1745
Williamson A. H (91) 986
Williamson W D (73) 307
Willson P (191 193) 63
Willson R N (166) 63
Wilms M (41) 66 (73) 609
Wilson A A (80) 1582 (67) 1891
Wilson F N (33 34) 59 (66) 1581
Wilson C *1073 (103) 1275
Wilson H *715
Wilson J G (66) 307 (27) 1743
Wilson K M (15) 1820
Wilson L B (10) 305 2032
Wilson R J (6) 1271 *1760
Wilson R M (2) 692
Wilson W F (50) 306 (13) 693
Wilson W J Jr (75) 773
Wilson W T (100) 604
Wiltrup G (61) 1498 (117) 1752
Wiltshire H (28) 461
Wilzel R (95) 610
Wimmer A (97) 1808
Windell J T 217
Windle J D (4) 692
Windrath F (77) 846
Wing I A (75) 1429
Wingertar C (50) 385
Wingrave W (29) 606
Winn D F (73) 604 (83) 1822
Winslow C E A. (75) 222, (148) 460 (2) 1271
Winslow J R (12) 532
Winslow R (123) 1059
Winter C (124) 155 (63) 313
Winter W A. (7) 922
Wintz H (108) 155 (85) 1589 (61) 1664
Wirgman C W (18) 64
Wise F (98) 148 (53) 918
Wise W D *188
Wishart D J G (26) 532 (61 88) 691
Wislocki G B (57) 603
With C (126) 317 (104) 392 (148) 544
Witherell C H (105) 62
Witherspoon J (118) 385
Wittenberg J (97) 1583
Wittich F W *652
Witzel O (94) 991 (68) 1664 (86) 1750
Wodak E. (118) 611
Wodehouse R E (149) 1431
Wodehouse R P (26) 1165
Woelfel A. 296 297 529 675
Woglom W H (66) 533
Wohl M G (86) 459 (85) 1582
Wolbach S B (70) 1273
Wolbarst A. L (102) 1822 (66) 2040
Wolcott W E *108
Wolferman S J (115) 1275
Wolff M (69) 1359
Wollenberg R (43) 694
Wollstein M (62 64) 919
Woltering R W (104) 779
Wood E J *1447 2031
Wood F C (25) 59 *94 (70) 691 (11) 918
Wood H B (65) 1058
Wood H C *1067
Wood W L (28) 1272
Woodcock H M (6) 1355 (15) 2127
Woodhead G S (16) 693 (23) 843 (16) 922 (17) 1061 (20) 1169
Woodman J 1342
Woodruff H W (17) 918
Woodruff S R (134) 605 (86) 986
Woods H (156) 63
Woods R H (50) 458
Woodward W C 55 (13) 688
Woody S S (150) 310 (2) 1351
Woodyatt R T (56) 533 (54 55) 1057 1885 *1910
Wooley P G (67) 458
Woolfenden H F (28) 2127
Woolford J S B (120) 385
Woolley P G (49) 771 1158 (70) 1581
Woolsey G (90) 1275
Woolsey J F (25) 221
Worley J R (88) 384
Worms G (46) 538 (72) 1172
Worster Drought C (11) 1494 (9) 1892 (16) 2127
Worth E (7) 769
Worthen T W (5) 1578
Wortman C (117) 780
Wright A. E (36) 1277
Wright B L (74) 1745
Wright G A (21) 226
Wright G J (79) 1582
Wright H (82) 62
Wright H M (53 61) 61
Wright H W (20) 770
Wright J D (128) 536
Wright T E (136) 1583
Wulff O (81) 846
Wurtz (60) 1825
Würtzen C. H (108) 460
Würtzen C N (134) 780
Wyckoff C W (83) 62
Wyeth G A. (107) 691
Wyeth J A. 447 (88) 459

AUTHOR INDEX

In this Index are the names of the authors of articles which have appeared in THE JOURNAL, the names of those who have read papers before Societies as published in THE JOURNAL and those whose articles have been abstracted in the Current Medical Literature Department The * preceding the page reference indicates that the article appeared in full in THE JOURNAL. The number in parentheses indicates the numbered paragraph on the page referred to The numbers not in parentheses indicate pages The author's name is followed by a brief clue to the subject of the article in brackets

A

Abell, I, [Cholecystostomy or cholecystectomy] (57) 939
Abramson, H L [Poliomyelitis] *546 [Serum preservatives] *1035
Abt I A, [Familial icterus] (3) 936
Achard C, [Chlorids in urine] (43) 491
Adamson H G, [Scabies in soldiers] (20) 809
Adamson R S [Bacillus resembling B tetani] (19) 1785
Adamson T, [Compressed oxygen] *1621
Addis T, [Urea excreting function of kidneys] (70) 66, [Urea in blood] (7) 1505 (1) 2006
Adkinson, J, [Diphtheroid organism] (82) 661 [Staphylococcus in asthma] (60) 1943
asse-Lafont, [Chloridimeter] (38) 491
r D F, [Facial deformities] (81) 1297
Aimard [Gravity of lesions in lungs] (43) 1217
Aimé H [Shell shock] (71) 1350
Akatsu S [Drug fastness of spirochetes] (38) 938 [Resistance of spirochetes] (39) 938
Albaugh R P, [Peculiar poisoning] *1033
Alday T, [Pepsin in stomach] (80) 1297
Alexander H L, [Pneumonia] 1941
Alexander J [Colonic dilatation] (119) 1437
Alfaro G A., [Hemoptysis] 699
Alivisatos A S [Hemorrhagic rectocolitis] (51) 152
Allan W [Hemolytic icterus] *1020
Allaria G B, [Infants' saliva] (45) 1668
Allen F M, [Fat in diabetes] (9) 936
Allison N, [Spinal tuberculosis] *452
de Almeida, A. O [Energy exchange in liver] (1) 804
Almenara, G [Leishmaniasis] (67) 318
Alton B H [Strychnin convulsions] (42) 224
Alvarez B G, [Vinegar in typhoid] (84) 885
Alzona F, [Subcutaneous nodules] (101) 495
Amadeo S B, [Oculocardiac reflex] (67) 1879
Ameuille P [Pleural tuberculosis] (37) 1148
Ammann R [Fluctuations in temperature] (43) 316
Amoss H L [Poliomyelitis] 994, (59-63, 65) 1435
Anders H S, [Failing heart] (157) 403
Anders J M [Mouth sepsis] 567, [Coagulation time] 729
Anderson J F [Meningitis serum] 1933
Anderson L G [Bismuth-iodoform-paraffin paste] (20 21, 1068
Andresen G [Albumin in urine] (98) 1952
Andrewes, F W [Tetanus antitoxin] (16) 1785
Andrews C F, [Great omentum] (116) 1437
Andrews, J B, [Health insurance] 390, 729, 994
Andrews, S, [Primipara at 46] *285
Andruetto, [Meningitis] (58) 1949
Angell E. B, [Nervous child] (140) 402
Angiolani, A., [Sugar in urine] (78) 1072, [Uric acid in urine] (48) 1441
Anichkoff N N, [Cholesterinemia] (85) 1951
Antoni N [Movements of eyes] (127) 158
Appelbaum, S J, [Health insurance] 1338
Aranowitz B, [Bacteria] 1578
Arce, J, [Verruga] (62) 317
Arkhipiants X D [Alcohol as disinfectant] (88) 1515
Armour J O, [Food shortage] 1339
Armstrong, D B, [Public markets] *103
Arnett J H, [Colonic dilatation] (119) 1437
Arnold H D [Higher degrees] 573
Arnozan X [Tuberculosis in southwestern France] (31) 1216
Arrillaga, F C, [Cancer of lung] (68) 1950
Arullani P F, [Acne rosacea] (84) 1588
Ash R L [Spinal tumors] (2) 1872
Ashford M, [Organization of Medical Reserve Officers] (108) 662
Ashhurst A P C, [Mosetig-Moorhof filling] (44) 735
Askenstedt F C, [Indican in urine] (64) 1782
Aub, J C, [Metabolism of old men] (25) 1872 [Caffein and heat production] (26) 1872 [Metabolism of dwarfs] (27) 1872 [Metabolism in nephritis] (28) 1872 [Metabolism with lymphatic leukemia] (29) 1872 [Metabolism in diabetes] (30) 1872
Auer E M [Oculocardiac reflex] *901, [Jacksonian epilepsy] (79) 1212
Auld A C [Bronchial asthma] (10) 1784
Austin A, [Kinsmen, Hall!] 1703
Austin J H [Acidosis] (97) 1005
Axtell W H, [Medical commission] 730
Azcoitia L A, [Emetin in enteritis] (38) 740

B

Bab, H, [Hypophysis and diuresis] (47) 812
Babcock R H [Asthma] *438
Bacchi [Myopia] (36) 811
Baehr, G [Typhus] 576 (70) 660
Baer W S [Sacro iliac strain] (65) 1663
Baerthlein K. [Para-agglutination] (86) 155
v Baeyer, [Artificial arms] (84) 944
Baglioni, G [Typhoid in vaccinated] (73) 1150
Bailey C H, [Arteriosclerosis] (44) 224
Bailey K [Tuberculosis] *1386
Bain W [Metabolism in gout] (44) 1348
Baird J S [Transplantation of ureters] (118) 1437
Baird R W, [Blood pressure] (126) 490
Balboni G M, [Echinococcus disease] (36) 1873
Baldenweck [Meningitis] (32) 1948
Baldy J M [Pennsylvania and entrance conditions] 1139
Balfour D C [Gastric ulcer] (146) 1875
Ball C R, [Serobiologic reactions] *262
Banke A G, [Abdominal wounds] (16) 809
Banzhaf, E J, [Poliomyelitis] *1531
Barach J H [Diabetes and syphilis] (39) 400
Baradulin G I [Tuberculosis of bladder] (99) 1671
Baratoux J, [War deafness] (35) 1877
Barbara B [Leishmaniosis] (65) 1879
Barbary, F, [Malaria] (41) 1948
Barbier H [Prophylaxis of infection] (37) 740
Bard L [Dilatation of bladder] (33) 582
Barker L F, [Conduction time] *903, [Pituitary solution] 1871
Barlaro P M, [Sclerosis of artery] (92) 1151
Barnard E [Urobilin in urine] (96) 737
Barnett G D [Intestinal eosinophilia] (23) 1780
Barney J D [Hydronephrosis] (35) 1662
Barnhill J F, [Otitis media] *13
Barraquer I, [Cataract] (89) 1789
Barrie G [Giant cells in bone lesions] (37) 735
Barringer B S, [Radium] *1227
Barrow, J V [Pneumococcal parotitis] *1680
Barth N [Peritonitis] (122) 234
Bartholomew R A [Syphilitic placentae] (81) 1945
Bartholow, P [Salicylic acids] (12) 1660
Bartlett W [Treatment for furuncle] *1904
Basile G, [Blastomycosis] (57) 1513
Basinger H R, [Thyroid] (63) 660
Baskett L W [Mercury poisoning] *1622
Bass R [Gout] 571
v Bassewitz D [Retention of placenta] (107) 945
v Bassewitz, E, [Chiggers] (56) 2012
Batchelor M D, [Intestinal bacteria] 1776
Battey W W Jr, [Retrodisplacements] (28) 65
Baumann L [Metabolism of scurvy] (3) 1660
Bäumler C, [Weil's disease] (37) 71
Bauzil L [Test for sugar] (37) 1293
Bayne Jones S [Roentgenography of lungs] (10) 1505 [Blood vessels of heart valves] (5) 1779
Bazett H C [Transfusion of blood] (16) 1947
Bazy [Diagnosis of projectiles] (40) 1667
Beach R M, [Separation of symphysis pubis] (2) 486
Beattie J M [Electrically produced hypochlorous solution] (16) 1006
Beck C [Hypospadias] (102) 1508
Beck E G [Osteomyelitis] 145
Beckman E H, [Tumors of spinal cord] (98) 402
Beckman V B [Perforation of uterus] (27) 228
Bedell A J [Oxycephalus] *1979
Bedford E A. [Epinephrin in blood] (12) 1779
Beeler R C [Pulmonary tuberculosis] (65) 488
Beer E [Tumors of bladder] *680 (134) 1875
Beeson B B, [Keratosis] *1169
Begtrup Hansen T, [Phototherapy] (95) 320
Behlow W W [Group study] *360
Behrend, M. [Dislocation of ulna] (111) 1875
Belter J R [Paraffin treatment] *1801
Belfield, W T [Social hygiene] 60
Belgrano C R [Pneumococcus peritonitis] (72) 1788
Bell E T [Myasthenia gravis] (70) 807
Bell H H [Hyperplasia of pineal body] (69) 149
Bell J N [Rupture of uterus] (4) 146
Belliboni E [Meningitis] (81) 1351
Belot, J, [Reeducation of soldiers] (41) 228, [Foreign bodies in eye] (35) 1786
Benjamins, C E, [Adenoids] (89) 1515
Bennett A. B, [Aural typhoid carriers] *33
Bennett C [Appendicitis following pharyngitis] (5) 1291
Bensaude, R, [Roentgen findings with cancer] (34) 1008 [Barium sulphate in gelatin] (35) 1511
Bercovitz, N [Leprosy] *1960
Bergeim O, [Goiter] (6) 64 [Cerebrospinal fluid] (61) 1064, [Calcium in blood] *1309
Berkley, H K [Nephritis] (3) 1209
Bernard, A [Picric acid in blood] (51) 229
Bernhard A. [Spinal fluid] (3) 309
Bernheim, B M [Limits of bleeding] (15) 1579
Bernheim Karrer, [Diarrhea in infants] (57) 1295
Berry E L [Luxation of thumb] *190
Bertolotti, M. [Roentgenology] (66) 1220 (74) 1296
Bethe A [Nerve transplantation] (28) 70
Bettman, R B, [Fluoroscope] *908
Bevan A D, [Medical education] 574 [Hypospadias] *1032
Bielonovsky G D [Suppuration in wounds] (97) 1671
Biermann [Gas gangrene] (91) 155
Bilancioni, G [Fever with mastoiditis] (109) 233 [Ocular anomalies] (114) 233
Billings F, [Health of soldiers] 1835
Billingsley, P R [Afferent spinal path] (17, 18) 146
Billington R W [Spinal arthropathy] (15) 1661
Bine R, [Innominate aneurysm] *113, [Duodenal ulcer] *1315
Bircher E [Gastroptosis and gastropexy] (43) 1512
Birdsall J C, [Renal tuberculosis] (36) 1662
Birge E G, [Pernicious malaria] *1475
Birnberg T L, [Chloroma] *1900
Bissell W W [Coma] *500
Bittorf [Typhus] (102) 408
Bizard [Syphilis] (44) 491, (42) 741
Blaauw E, [Military aviators] 1205
Blachly A T [Knee writing] *1696
Blackfan, K D [Intestinal bacteria] 1776
Blad A. [Bile peritonitis] (119) 234
Blaine E S, [Spondylitis] (8) 1143
Blair V P [Carcinoma of mouth] (66) 1004
Blaivas A. J, [Blood sugar] (88) 1146
Blanc C, [Dyspeptic diarrhea] (27) 315
Blanc J [Neuroses] (79) 1351
Bland Sutton, J [Arsenic cancer] (2) 150
Blankenhorn, M A. [Pernicious anemia] (23) 1063 [Bilirubin in plasma] 1871
Blanton S [Speech inhibition] (94) 737
Bloch C E [Carbohydrate starvation] (93) 1444 [Fat deficiency disturbances] (102) 1516
Bloch L., [Cardiovascular disease] *691
Bloom C J [d'Espine sign] (110) 1583
Bloomhardt S L, [Great omentum] (116) 1437
Bloor W R [Cholesterol in blood] (51) 806
Blum E [Malingering] (49) 1009

Stevenson W C (3) 1060 (3) 1355
Stewart D H (140) 63, (8) 688, (68) 772
Stewart F E (109) 841
Stewart F T, (139) 1660
Stewart G D, (14) 58
Stewart G N (68) 1891
Stewart L F (112) 1354
Stewart W H (13) 1743
Stheeman H A, (89) 1897
Stielow P (108) 928
Stifel R E (26) 839
Stiles P G, (28) 1427
Stillman E (4) 1426
Stimson G W (86) 691
Stockard C (82) 1430
Stocker A., (113) 155
Stocker S, Jr (68) 989
Stocks P (29) 1893
Stockton C G (128) 309
Stokes A. (30) 1277
Stokes A C 304 768
Stokes H (22) 2127
Stokes J H 675 (89) 921 *1191, (53 54) 1273 (46) 1658
Stoklasa J (65) 845
Stoldt E (79) 458
Stolkind E (38) 606
Stolkind E J (95) 1827
Stoll H. F (84) 2040
Stone R E, (10) 219
Stone R L (49) 985
Stone R V, (78) 534
Stone W J *324
Stone W S (98) 1354
Stoner W C, (39) 1890
Stoney F A (32) 1585
Stopford J S B (22) 1495
Stovall W D, *804 *1620
Stowe H M, (38) 1820
Strachauer A. C (51) 772
Stracker, O (98) 1281 (88) 1750
Stransky E (107) 1281
Strasburger J, (58) 67
Strasser A A. (90) 773
Strasser C (66) 777
Strate L K 676
Straub M (117) 1361
Strauch A (4) 917
Straus, D C (120) 1746
Strauss A (82) 1589
Strauss A A., *267
Strauss, H (77) 777 (76) 1750
Strauss M (73) 539 (74) 695, (64) 1358
Street E (89) 62
Street J P (122) 149 (121) 224 (86) 773, (102) 1659 (77) 1892 2116
Streeter E C, (21) 1272
Streeter, G L, (4) 455
Streeter H A (15) 918
Streich S Y, (81) 1896
Stricker L, (98) 62
Strickler A *249 (63) 1166
Strodtmann (106) 466
Strohn, A, (43) 925
Ström S (133) 850
Strong F (66) 1745
Strong L W *1923
Strouse S *712
v Stubenrauch (73) 695 (91) 1750
Stucchi, A., (79) 1896
Studzinsky I B (127) 930
Stuessy S, (8) 219
Stukkey L G (89) 391
Stümpke G (61) 228
Stunkard H W (86) 535
Sturges, W S (47) 1352, (44) 1820
Sturm M J (125) 149
Sturmdorf A., (106) 384
Sturtevant M (22) 455
Stutzin (50 51) 1063 (70) 1279
Suchanek E (106) 1281
Sudler M T (67 71) 1745
Suevoshi, Y, (119 120) 929
Sugiura K (64) 604
Suker G F (102) 986
Sullivan E A. *95
Sulzbacher B L (70) 1353
Sundberg C (147) 156, (102) 1827
Sundell C E, (25) 1893
Sundwall J (68) 1745
Süpfle K. (78) 990 (32) 1432
Supple E A (42) 984
Susanna V (62) 463
Sutherland H (20) 461
Sutherland W D, (10) 310
Suttner C N (114) 841
Sutton, F (73) 1892
Sutton G D (65) 1353
Sutton R L *185 (92) 459 *565 *947, *1613
Svestka V (65) 389
Swan, J M, (13) 220
Swan, R H J (23) 461
Swanson C (37) 221 (131) 692
Sweek W O (45) 61
Sweet J E, (140) 1660
Sweitzer, S E (47) 306 *1196
Swett P P, (84) 2040
Swezey A J (30) 771
Swift G W, (75) 384 (115) 1168
Swift H F, 599 1738
Syme, G A, (28) 1824
Syme W S, (19) 1276
Symmers, D *397 *1457
Symmers W St C (25) 150
Sztanojevits L, (61) 67
Szubinski, (56) 389

T

Taddei D (87) 1174
Taillens J, (41) 312
Takahashi, S (20) 65
Takaki, F (72) 533
Takaki Y (38) 1170, (19) 1356, (27) 1747
Takasaki Y (121) 929, (99) 1665
Talbot E S, (49) 221
Talbot E S, Jr *1849
Talbot W O (123) 1355
Talbott J A. (194) 63
Talley J E (128) 1168
Tallman M H (105) 1822
Tallqvist, T W, (143) 544
Tandberg, O, (133) 994
Taniguchi T, (72) 533
Tanzi, 569
v Tappeiner, (63) 539
Tarasservitch, L A, (36) 2128
Taussig A E, 2032
Taussig F J 1818
Tavernier L (62) 152
Tayler-Jones L (132) 1275
Taylor, A E (64) 1821
Taylor B M (67) 1659
Taylor, D C (11) 460
Taylor, E H (14) 770
Taylor E W (76) 841
Taylor G, (28) 1170
Taylor G H (138) 536
Taylor H C, (101) 384, (126) 604
Taylor, H L (114) 604 (107) 1583
Taylor, J (1) 1276 (1) 1431
Taylor, K (3) 385 (32) 606
Taylor, R E (145) 460
Taylor R T (116) 536
Taylor W M, (83) 1353
Teacher, J H, (19) 1893
Teague, O (35 36) 2038
Teague S M (60) 147
Tedrowe, C W, (162) 149
Tees F J (66) 691
Telegra V I, (115) 1361
Telfair J H, (19) 1426
Telford E D, (4) 1660
Ten Broeck, C, (22) 2038
Tengström, S, (117) 1666
Tennant C E 218
Terebinsky V I, (123) 850
Terhune W B (111) 1659
Ter Kuile T E (104) 232
Terrasse J (34) 311
Terrell T C (132) 1746
Terriberry W S 766, (98) 841
Terrien F (23) 386
Terry A H, Jr *1776
Terry W I *1774
Teutschlaender O (57) 313
Teynac A, (33) 1747
Thaler H. (50) 1496
Thalhimer W (16) 2126
Thannhauser S J (87) 1750
Thaon P (50) 151
Thayer, W S, (13) 455
Theilhaber A (56) 844
Thevenard, (81) 153
Thévenot L, (69) 152
Thibaudeau A A, (147) 63
Thibault H (15) 1165
Thiele (77) 610
Thom, D A (16) 1492 (65) 1891
Thomas C P, (108) 1822
Thomas, G E, (135) 385
Thomas G J (82) 223 (57) 1353
Thomas H B (53) 147, (87) 986
Thomas J J 2036
Thomas, J L (3) 536
Thomas T T, (11) 1426
Thompson, A L (76) 691
Thompson E, (139) 385
Thompson G H (32) 1890
Thompson J A., (86) 1275
Thompson J E (135) 1060
Thompson L, *652, *1303, (142) 1823 (88) 1892
Thompson R (36) 151
Thompson S E (49) 61, (124) 385
Thompson, W G, (89) 1275
Thompson W M, (86) 2040
Thompson W R, (128) 773
Thoms H K *1197
Thomson E S, (19) 918
Thomson F H, (17) 922
Thomson H C (28) 774
Thomson, J (150) 1431, (17) 1276
Thomson, J D, (11) 1060
Thomson S (26) 606 (9) 2041
Thornburgh A. H 2121
Thorne F H (4) 1656
Thorne, W B (47) 1824
Thornton L H D (4) 2041
Thornval A, (136) 612
Thrash E C (47) 840
Threlkeld A E (59) 1659
Thro W C (103) 921
Thursfield H (32) 1661
Tidy, H L (17) 774
Tigerstedt R (128) 993
Tiisala K V (126) 993
Tileston W *995
Tilles, R S, (111) 223
Tillgren, J (119) 1752
Tilton B T, (114) 63, (100) 921
Timberman A (110) 1275
Timme W, *1438
Tinker M B (138) 149
Tintner, F, (81) 230
Tipping A B (107) 308, (104) 1659
Tirumurti, T S (21) 537 (22) 843
Tisdal, V C (159) 224
Tisserand G (50) 1171 (37) 1747
Tizzoni G (94) 1827
Tobeitz (119) 611
Tobias E, (87) 928 (31) 1432
Tobler L (81) 927 (23) 1432
Tomlinson R W (39) 306
Tompkins, E 2113
Tompkins E D, (51) 1744
Tongu Y (124 125) 543
Tonnel (41) 1748
Tonney F O (66) 920
Tood F C *1386
v Torday, A, (59) 1358
Torrance G *112 (7) 688
Torres O (107) 1361
Torrey E, (108) 1583
Torrey J C (55) 221 (65) 1273
Torrey R G (8) 1426
Torrington H M (41) 1165
Tottingham W E (46) 1057
Tournade A (76) 153
Tourneaux J P (53) 1662
Towle H P, (96) 62
Townsend, C H T, (87) 535 (59) 1744
Tracy A W (118) 773
Traquair H M (15 23) 1893
Trask J W 424 953 (5) 1271 (148) 1431 (90) 1659
Travassos L (97-99) 697
Travis W C (36) 2038
Treiber (70) 846
Trembur F (75) 1750
Trendelenburg W (66) 1064
Treupel G (62) 539 (71) 990
Tribondeau (13) 1432
Trist M E (25) 146 (69 70 73 74) 222
Troell A (37) 382, (105) 384 (60) 608 (134) 850, (19) 1056, (120, 121) 1752
Troutt J M (122) 1275
Trudeau E L (15) 606
Truffier (36) 461
Truitt R P (108) 308
Trunecek C (68) 845
v Tschermak A (101) 1281
Tsiminakis C (76) 230
Tsurumi, M (66) 989, (20) 1584
Tsutsui (31) 461
Tsuuno T (20) 65
Tucker E F (145) 149
Tudeer, O (122) 993
Tuffier T (35) 461
Tugendreich J (39) 1357
Tuley H E *1844
Tullidge E K. (86) 1582 (87) 1892 (72) 2040
Tunnicliff R *1606
Tuohy E L (54) 985 (74) 1167
Turck R C (39) 1744
Turlais (30) 1356
Turner D, (16) 1276
Turner G G (13) 986 (5) 1355 (26) 1893
Turner G I (122) 850
Turner J R, (70 71) 533
Turner J S (123) 385
Turrell W J (24) 461
Turrentine A E (22) 839
Tweedy E H (29) 1277
Tweedy J, (5) 460
Twining G H (55) 772
Twort F W (27) 150
Tydings O (33) 1820
Tyson T M (145) 1660
Tyzzer E E (56) 603 (38) 1658

U

Uffoltz, (36) 1585
Uhle A A (142) 224 (71) 1493
Uhlenhuth P (102) 154 (72) 313 (89) 610
Uhlmann R (34) 1061
Uhthoff W (36) 694 (67) 926
Ullman J S, (104) 1354
Ullrich, J H (63) 383
Unger L J, *1195
Unna P G (49) 227 (50) 312 (65, 70) 609, (56 61) 776 (50) 844 (62 66) 926 (61) 989 (41) 1062 (49 55) 1278, (38) 1357, (17) 1432, (60) 1749
Upshur J N (123) 1660
Urbani L (75) 390
Urbantschitsch E (54) 228
Urra F M (102) 1751
Urstein M S (85) 1896
Ustvedt, Y, (64) 1498

V

Vago, H A, (60) 1358
Vahram M, (49) 1662
Vail C E, (14) 1584
Vail D T (22) 918
Valentine R G (106) 1659
Vallette P (61) 152
Valois G, (21) 1356
Van Allen H W, (15) 146
Van Amstel P J B P (81) 846
Van Atta J R, (95) 921
Van Beuren F T Jr *111
Van Bisselick, J W, (92) 1897
Van Bruggen A C (108) 992
Van Buren G H (24) 306
Van Buskirk L H (128) 1583
Vance A K (110) 384
Vance, C A, (73) 1659
Vance W K (131) 842
Van Cleave H J, (53) 1744
Van de Graaf, A M (137) 156
Van de Kastelle R P, (43) 2044
Van den Bergh A. A. H, (107) 232
Van Der Bogert F (9) 219, (112) 1168, (36) 1352
Van Der Hoeve J (59) 1498
Vander Hoof D, (8) 1492
Vander Veer A 1936
Van H Craftdijk C J (60) 1498
Van Heukelom J S (126) 1361
Van Hoogenhuyze C J C (94) 1897
Van Leersum E C (136) 156 (124) 1361
Van Leeuwen G A, (41) 1171 (119) 1361
Van Leeuwen, W S (109) 697 (90) 1897
Van Loghem J J (98) 392
Van Metre P W, 529
Van Poole, G M (67) 383 (92) 1822
Van Rijnberk G (111) 70
Van Rooyen J (119) 1282
Van Slyke, D D, (9) 688 (38) 771 (79) 1430
Van Slyke L L (41-44) 1057
Van Vlack H. G (68) 1353
Van Walsem G C, (56) 1063
Van Wayenburg G A M (49) 2129
Van Zant, C B (44) 147
Van Zwaluwenburg J G (84) 1659
Varay F (41) 461
Varney H R (89) 1167
Varrier-Jones P C, (16) 693 (23) 843 (16) 922, (17) 1061, (20) 1169
Vass T E, (153) 606 (144) 1746
Vassallo B (103) 1751
Vassallo S (36) 1661
Vaughan G T, (195) 63
Vaughan H F, (55) 1273
Vaughan J W (79) 1659
Vaughan V C (89) 308 448 (79) 458 599, (108) 921, 1365 1489 1629
Vaughn E H, (142) 1060
Vayssière E (32) 311
Veasey C A (114) 1168
Vecsei F (79) 696
Veeder B S (115) 224 (1) 917 (6) 1351
Velt J (73) 846
Velter, E (54) 988
Venable C S (128) 385
Veraguth O (73) 1587
Verbrycke J R Jr (87) 1582
Verdozzi C, (129) 155, (75) 390
Vergely, J, (31) 1061
Verger, H, (29) 1061
Verhoeff, F H (47) 690, (101) 986 (30) 1056
Verney, L (56) 463
Verocay J, (54) 1749
Verpy G, (75) 1826
Verschaffelt, E (111) 697
Verwey A, (140) 156
Verzar F (82) 1280
Vessells F M 2121
Vestberg, A, (98) 1174
Vetlesen A, (128) 1362
Vetlesen H J (134) 994
Veyrassat (61) 926
Viannay C (67) 152
Vidal, E (47) 1586
Vidt C E (65) 1659
Viehoever A (61) 1821
Vienne G, (33) 1894
Vigano L (81) 1173
Vignard P (50) 1171
Vigne A (30) 694
Vignes H (36) 987
Villa E, (114) 849
de Villa S (10) 1431
Villanueva A (132) 156
Villard E (34) 1747
Villaret M (42) 538 (25) 1356, (31) 1747
de la Villéon, P (22) 1356
Vilvandré G (6) 1060
Vincent B (40) 383 (27) 693
Vincent H (36) 843 (70) 1825
Vineberg H N 2122
Vining C W (31) 1661

Coughlan J, [Insects and reptiles] *1549
Courtney A M [Excretion of sodium chlorid] (6) 309
Couvreur A [Restoration of nerves] (40) 315
Cowie D M, [Calcium metabolism] (4) 936
Cox J M [State regulation of practice] 873
Cox J W, [Blastomycosis] (24) 1345
Crabtree E G, [Pyelonephritis] *589
Craig C F [Complement fixation test] *773
Craster, C V [Poliomyelitis] *1535
Craver L F, [Sodium carbonate] (72) 66
Crenshaw, J L, [Prostatectomy] *611
Crisler J A., [Hyperthyroidism] (124) 809
Crook J L [Appendicitis] (115) 1005 [Left sided appendicitis] 1286
Crosby C E [Pellagra] *1403
Cross C [Medical Reserve Corps] 1772
Crowe S J [Tonsillar and nasopharyngeal infections] (28) 659
Csernel E, [Typhus] (53) 667
Cuenca J B [Anthrax] (88) 1589
Culbertson C [Operation for sterility] (120) 1509
Culver H, [Gonorrhea] *362
Cumming J C [Typhoid] *1163
Cummins W T [Bone disease] *839
Cunningham W F, [Diphtheroids] (14) 936
Curl H, [Effects of breakfast] (2) 2006
Curschmann H, [Myositis epidemic] (66) 943
urtis A H, [Pyuria] (169) 103
urtis C S, [Cholesterol in blood] () 1287
Curtis W G, [Health insurance] 802
Cutler D W [Bacillus resembling B *tetani*] (19) 1785
Cutler E C [Strychnin convulsions] (42) 224
Cutting J A, [Mastic test] *1810

D

Dabney V [Edema from brazil nut] *1476
Dachtler H W [Roentgenotherapy of tumors] (8) 577
Dakin H D [Disinfection of water] (3) 2008
Dallmier, R [*Toxicity of emetin*] (47) 741
da Matta, A A, [Granuloma] (118) 410
Dana C L, [Puncture headache] *1017
Darnell W E, [Ether pneumonia] (13) 874
Dasso H [Gonorrhea] (87) 74
Davidson, W T C [Tuberculosis] (12) 314
Davis B F [Perforation of septum] *1620
Davis D J [Vaccine therapy] *159
Davis D M [Blood composition and urine secretion] (62) 877
Davis E G [Double ureter and kidney] (57) 877
Davis G G [Backache] 1000 [Buttock injuries] *1689
Davis J D S [Bastedo s sign] (117) 1005
Davis J S [Transplants of bone] (39) 735
Davis L [Cancer of cervix] (59) 1663 [Echinococcosis] (36) 1873
Davison, W C [Dodds Parker suspension appliance] *909
Dawson J W [Disseminated sclerosis] (9) 151 [Spastic paraplegia] (10) 151
Dayton A B [Complications of Percy s cold iron] (79) 580
Dean H R [Tetanus] (14) 1785
Deaver J B [Recurrence of gallstones] 222 [Cholecystostomy vs cholecystectomy] (115) 878, [Peptic ulcer] 1778
DeBuys L R, [Syphilis and baby] (24) 734
Deelman H T [Cancer in Netherlands] (89) 815
Deiters E [*Albumin in urine*] (60) 812
De Kruif P H. [Anaphylatoxin] *1524
De Lange C, [Familial splenomegaly] (98) 1789
Delbet P, [Bone grafting] (41) 1608
De Lee J B, [Fetal infection] (30) 659
Delfino V [Embalming] (116) 946
Delorme E [Literary output of war] (57) 406 [*Pericarditis*] ( ) 1069
Delphey E V [Tentative draft"] 802 [Health insurance] 1500
Deluca F A [Biologic diagnosis of *pregnancy*] (86) 74
Delzell W R, [Female remedies] (3) 64
Dematheis F, [*Postinfectious pluriglandular disturbances*] (78) 1010
Dematteis F [Physostigmin and nervous *system*] (70) 1220
DeMerritt C L [Teaching in urology] 481
Denechau D [Protuberant abdomen] (34) 1948
Denis W [Cholesterol in blood] (59) 806
Denny E C [Nostrums and quackery] 1648
Denton M C, [Food values] 326
Denzer B S [Typhus] 575, *1165
Derache P [Wounds of knees] (34) 1069
Dercum F X [Neuroses] *1223 [Torsion spasm] (69) 1782
Descoust P [Median paralysis] (34) 1210
Desha L J, [Kidney tests] (130) 68
Desjardins, A U, [War wounds] *18
Desplas B [Secondary suture of wounds] (24) 1877 [Repair of wounds] (26) 1877
Déve F [Echinococcus disease] (67) 151
Dibbelt W [Weight of heart] (38) 881
Dick G F [Arthritis] *622 [Urine in *focal* infection] (31) 1063
Dick G R [Urine in focal infection] (31) 1063
Dietrich [Weil-Felix reaction] (56) 742
Di Giuseppe T [Goggles for firing line] (82) 1351
Dillingham F S [Kidney and bladder tuberculosis] (23) 1002
Dillingham A R [Ankylosis of hips] 866
Dillon J A [Tonsils] 1057
Distaso A [Autodisinfection] (17) 1006
Dixon S C [Poliomyelitis] *90 [Typhoid] (107) 1146
Doberer [Tardy tetanus] (87) 944
Dock C [Laboratory and clinical teaching] (106) 1005 [Cardiovascular *renal* disease] (63) *1346*
Dodson C E [Wounds of blood vessels] (3) 150
Doernberger E [Whooping cough] (76) 492
Dold H [*Hyperleukocytosis*] (55) 492
Doléris [Welfare work] (44) 1149 (31) 1293
Dolley D H [Nerve cells] *756
Donaldson R [Plant hairs] (26) 405 [Protozoal cysts in feces] (12) 1510
Donnet V [Cirrhosis and psychopolyneuritis] (74) 1350
Dorie [Diabetic coma] (61) 1586
Dotson W [Ear troubles] (125) 809
Douglas S R [Symbiosis] (24) 1585
Douris [Chloridimeter] (38) 491
D Ovidio R [Erythrodermia] (70) 1951 [Meningitis] (76) 1951
Downes W A, [Syphilis of stomach] 308
Downs A W, [Secretin and blood] (6) 2006
v Driga L T E [Leukocyte picture] (109) 409
Dragoo C H [Gonorrhea] (102) 1290
Dragstedt L R [Ulcer] *330 [Intestinal obstruction] (44) 938
Draper G, [Poliomyelitis] *1153
Dresbach M [Diabetes] (15) 310
Drew D [Second primary growths] (4) 227
Dreyer C [Transfusion of blood] (16) 1947
Drummond H [Wounds of abdomen] (2) 1214
DuBois E F [Metabolism of old men] (25) 1872 [Caffein and heat production] (26) 1872 [Metabolism of dwarfs] (27) 1872 [Metabolism in nephritis] (28) 1872 [Metabolism in diabetes] (30) 1872 [Water elimination] (31) 1872
Ducroequet [*Pseudarthrosis of humerus*] (73) 1350
Ducuing J [Wounds of knee] (30) 1877
Dudgeon, L S, [Malarial parasite] (8) 1438
Dunham E K [Disinfection of water] (3) 2008
Dunn G R [Transfusion] (31) 938
Dunn J S [Hemiplegia] (24) 582
Dupasquier [Skin grafts] (56) 1149
Duprat C L [Psychotherapy in wartime] (40) 1512
Durel W J, [Tuberculosis] (123) 1783
Durham F M, [Typhoid bacillus] *780
Durham H A., [Joint tuberculosis] *282
Durney E [Open air schoolchild] (122) 68
Duroux E [Restoration of nerves] (40) 315
Dvas A D, [Vincent s angina] *1596
Dyer I [National Board of Medical Examiners] 657
Dyroff A [Venereal diseases] (77) 494
v Dziembowski S [Parenteral injections of milk] (72) 230

E

Eagleton W P [Brain tumor] *333
Eastman T B, [Hyperthyroidism] (61) 148
Eddy N B [Secretin and blood] (6) 2006
Edmunds W [Thyroid] (14) 1147
Edwards W D [Leukemia and benzol] (90) 1065
Effler [Tuberculosis] (63) 667
Ege R [Sugar in blood] (88) 1222
Ehrenfried A [Chondrodysplasia] *502
Ehrich W S, [Ureteral calculus] *1028
Ehrmann R [Colitis] (53) 492
Eikenbary C F [Bone and joint lesions] (15) 658
Einhorn M [Duodenal alimentation] 1776
Eisen P [Tuberculous peritonitis] (9) 577
Eisendrath D N [Urinary infection] *540 [Osteomyelitis of spine] (36) 735 [Common duct stones] *968
Eisenstaedt J S [Prostatic abscess] *838
Elder C S [Fee division] 1651
Ellermann V [Specific gravity of organs] (70) 2012
Elliott A R [Diagnosis of *nephritis*] *1955
Elliott C A [Osteomalacia] (10) 1660
Elliott J A [Elephantiasis nostras] (74) 488 [Absorption of mercury] *1024 [Detection of mercury] *1693
Elliott T R [Hemothorax infection] (2) 1438
Elliott W M [Meningococcal infection] (9) 227
Elsberg C A, [Xanthochromia] *1802
Ely L W [Ankylosing operations] *183
Emerson H [Alcoholism] 899 1280
Emile Weil P [Vaccine therapy] (34) 942 [Typhoid] (50) 1149
Emmons A B, Jr [Health insurance] 652
Emrich W [Oil of chenopodium] *1436
Enebuske C J [Vasomotor unrest in insane] (20) 1002
Enfield C D [Conservatism of tonsils] 1501
Engel C S [Examination of urine] (64) 230
England J W [Justice to pharmacist] 1864
Englander S [Diverticulum of urethra] *351
Engman M F [Ringworm vaccine] *543 [Salvarsan] 1203
Enos M M [Hospitals facing parks] 568
Epstein A A [Acidosis] (14) 310
Ercolani P [Nephritis] (68) 1670
Erdos T [Radium in leukemia] (31) 1288
Ernberg H [Lactation] (128) 153
Escomel E [Alligator pear] (35) 1151 [Hemorrhoids] (68) 1513
Esser J F [Plastic surgery of face] (37) 1144
Esteves J A, [*Priapism*] (67) 1950
Etienne C [Cholesterinemia in paratyphoid] (31) 1948
Eustis A [Cardiovascular renal disease] (150) 738
Evarts A B [Thalamic lesions] (66) 1782
Ewing J [Radium in cancer] *1238, [Peptic ulcer] 1777
Eyster J A E [Cardiac impulse] (5) 64

F

Faber A [Wassermann reaction] (119) 1012 [Tongue as mirror of stomach] (110) 1590
Faber H K [Experimental arthritis] (77) 73 [Goodman s auto serum] (36) 311
Fairbanks A W, [Food poisoning] (46) 1144
Fales H L [Excretion of sodium chlorid] (6) 309
Falk K G [Elimination of hexamethylentetramin] (48) 579
Fancher H L [Hernia] 1286
Fantus B [Salicylates in arthritis] (9) 1505 [Blood pressure registration] *1807
Farr, R E [Abdominal surgery] (73) 1874
Faught F A [Blood pressure phenomena] 1280
Fay, O J [Surgery of liver] 145
Federici N [Pneumonia] (71) 1220 [Monoplegia] (66) 1950
Federley H [Chromosomes and heredity] (99) 886
Feldman, I [Treatment of wounds] (14) 314
Felsen J, [Acidosis] (14) 310
Felton L D [Poliomyelitis] *752
Fenestre [Paratyphoid A plus typhoid] (50) 1294
Fenton W J, [Intrathoracic aneurysm] (9) 880
Ferguson R [Unmulish trick] 1139
Fernandez, M, [Balneotherapy] (77) 318
Fernandez U [Dilatation of uterine cervix] (71) 318
Ferrand J [Disturbances of reflex origin] (44) 1441
Ferrannini A, [Cancer of liver] (70) 814, [Paralysis of diaphragm] (98) 1352 [Progress of science] (61) 1513 [Blood disease and spleen] (46) 2011
Ferrannini L [Circulatory apparatus] (70) 668, [Fatigue toxins] (89) 1011
Fichera S [Circulatory apparatus] (70) 668 [Fatigue toxins] (89) 1011
Flessinger N [Postoperative jaundice] (43) 1877
Flérez J [*Impending gangrene*] (28) 1511
Fildes P [Penetration of arsenic into brain] (6) 1147
Findlay L [Tetany and parathyroids] (6) 1784
Findley P [Prolapse of uterus] (5) 398 [Hydatidiform mole] (3) 1942
Fine M J [Sputum cup] *1177
Finkelstein B K [Cancer of stomach] (86) 1515
Finlayson, G A., [*Dysentery*] (9) 581
Finney J M T [Salvarsan] 1572 [*Gastric polyposis*] *1869*
Finochietto R [*Gastric ulcers*] (70) 1513
Fiolle J [Suture of intestine] (71) 1010
Fishbaugh E C [*Spontaneous* anastomosis] *624
Fishberg M [*Conjugal* phthisis] (13) 936 [Tuberculosis and war] *1791
Fisher A L, [*Syphilitic* lesions] **366*
Fisher I [Health insurance] 801
Fisher J B [Dysentery] (8) 581
Fittipaldi E U [Acetone in *urine*] (73) *1072*
Flaherty F H [Avulsion of scalp] 1778
Flatau G, [Convulsions] (72) 982
Fleischner E C [Tonsillectomy] (19) 927
Fleming A [*Symbiosis*] (24) 1585

Schanz I (81) 314 (88) 740 (68) 695
Schat F (47) 1277 (60) 1749
Schauman O (91) 1066
Schaver J (100) 149
Schede F (7) 1064 (86) 1250 (4) 1664
Scheel A (106) 1828
Scheet M I (7) 1656
Schellenger F A A (84) 986
Scheltema M W (88) 46 (110) 612
Schenk A K (96) 231
Schepelmann E (37) 847
Scheppegrell W (53) 533 *707 1155
Scheremetin Kala M A (90) 731
Schereschewsky J W 1160 (19) 1492
von Scheurlen (84) 990
Schlemenz I (67) 984
Schiffbauer H J (110) 604
Schill A M (84) 773
Schiller A N (116) 459
Schiller L (82) 1493
Schilling N (29) 2028
Schindler R (48) 1496
Schippers J C (101) 232
Schlagenhaufer S (4) 1749
Schlenker L *1020
Schlesies E (10) 1278
Schlesinger A (108) 611
Schlesinger E (18) 1432
Schlesinger O (63) 989
Schlichtegroll M (90) 1250
Schloessmann H (84) 314
Schloffer H (2) 697
Schlomovitz B H (70) 2038
Schloss E (84) 778 (72) 926 (47) 1496
Schloss O M (3) 219 (5) 1578
Schlutz F W (6) 1578
Schmeisser H C (29) 457
Schmerz, H (79) 779 (86) 990
Schmid H H (64) 389
Schmidt A (80) 314
Schmidt C. L. A (91) 148 (74) 1821
Schmidt H B (82) 1609
Schmidt H E (61) 713 (64) 926
Schmidt L. E. *157 (48) 771
Schmidt P (75) 990 (24) 1432
Schmidt R. E. (118) 224
Schmitt A (78) 1250
Schmitt J S (91) 1822
Schmitz, A (6) 697
Schmitz H (92) 2040
Schmitz K E. F (109) 155
Schnader W A (67) 1493
Schneider A *1615
Schneider C (69) 228
Schneider E. C (2) 1819
Schneider F Jr (20) 689
Schneider J P (15) 455
Schnitzler J C (91) 1897
Schöbl O (71) 920
Schoemaker J (58) 608
Schoenberg M J *2054
Schoepf (50) 1357
Schofield F W (47) 383
Scholl H. (100) 779 (88) 847
Scholz H. (58) 313
Scholz W (55) 695
Schönbeck, O (63) 608
Schönberg S (77) 927
Schoolman A (29) 1820
Schoondermark A. (102) 392 (99) 1827
Schorer E H. (51) 918
Schrager A L. (108) 1354
Schreiber L. (65) 228
Schricker (87) 68
Schroeder J H (114) 1822
Schroeder L. C (3) 219
von Schrötter H. (80) 68 (80) 1065
Schrumpf P (77) 1280
Schüffner W (79) 383
Schultz, J H (55) 1358
Schultze F (92) 154
Schumann E. A. (3) 146
Schürmann H (72) 990
Schürmann W (64) 67 (69) 313 (76) 540
Schütz E (37) 1061
Schütz F (66) 1749
Schütz J (41) 777
Schütze H (2) 385
Schützinger (93) 1589
Schwalbe J (86) 610
Schwartz A. (33) 1170 (64) 1587
Schwartz A. B (6) 219 (8) 769 (20) 1056 (40) 1428
Schwartz H. (16) 455
Schwartz H. J (62) 1166
Schwarz G (74) 609
Schwarz O H. (113) 224
Schwarz R. B (95) 847
de Schweinitz G E. (70) 383 *393
Schweitzer B (83) 1359 (80) 1750
Schwenk, C. (53) 66
Schwenke J (77) 1588
Schwetz J (5) 606
Scott E. (11) 1165 (117) 1822
Scott E. L (8 9) 1819
Scott C D (113) 1168
Scott C W (35) 606
Scott H H (1) 2126
Scott J M 1347
Scott O J (69) 147
Scott R W (7) 182 (48) 2079
Scott Z T (182) 63
Scripture M W (84) 534 (9) 772
Seaman W (138) 785
Sears C J (112) 841
Seba J D (101) 471 (119) 921
Seechiert A (83) 1827
Secor W I (97) 147
Secher K (123) 317 (12) 1357
Sedgwick W T (2) 78 (42) 1580
Seefisch G (68) 1750
Seeley W I (60) 1353
Seelhorst (81) 1429
Seelig C (44) 771
Seelman J J (60) 1273
Seheult R (17) 1747
Sehrt E (88) 1359
Seidler J [illegible]
Seiffer W (47) 1377
Seiffert G (64) 228 (91) 541 (7) 1259 (86) 1589
Sekiguchi S (27) 984
Seligmann E (90) 41 (112) 779
Sellards A W (34) 1890
Sellers R B (139) 1746
Selter H (66) 845
Sencert L (80) 153
Senear F E (79) 773
Senechal M (46) 462
Seng C (21) 386
Senger E (40) 1377
Sequeira J H (32) 987
Serafini C (53) 413 (118) 543
Serk J P (112) 1361
Serra I (126) 612
Seubert R (106) 610
Sever J W (121) 1059 (18) 1779 (12) 1657 2036
Sevestre J (35) 923
Sewall H (3) 1426
Sexauer (75) 777
Sexsmith C H (51) 1493
Sexton L (120) 1355
Seyl H H (39) 1820
Sezary A (36) 737 (38) 843
Shabad J A (132) 543
Shabanoff A. N (112) 1361
Shackleton W F *1600
Shallenberger W F (43) 478 *1011
Shamarin A K. (114) 1361
Shambaugh C F (9) 532
Shamoff A N (21 22) 381
Shanahan W T (92) 1582
Shannon W R (42) 2039
Shapiro J M (26) 1820
Shapiro M (83) 986
Sharp W N (71) 147
Sharpe W *876 *1536 (7) 2127
Shattuck C C (38) 918 (39) 1057 (50) 1493
Shaw A I (92) 1582
Shaw F H (24) 1747
Shaw H A (153) 224 (107) 1822 (95) 2040
Shaw H J (124) 842
Shaw H L K (2) 219
Shaw T (81) 1745
Shcherbak A E (109) 1361
Shearer J S (133) 149 (9) 455
Sheddan L L. 1348
Sheehan R (134) 385 (132) 1355
Sheetz J W (111) 773
Sheill S (8) 693
Shennan T (10) 537 (2) 1493
Shephard J H (136) 605
Shern A C (6) 842
Sherer J W (142) 1431
Sherman D H (5) 219
Sherman H (49) 1273
Sherman J M. (45) 1820
Sherrick J W (95) 308
Sherrington C S (1) 773
Shie M D (38) 1890
Shields C L 1888
Shiino K. (107) 1751
Shimizu S (123) 929
Shipley A. M. *1602
Shipley J L (3) 838
Shipley P G (21) 983
Shipway F E (26) 537
Shirokogoroff I I (128) 850
Shivdas S P (35) 1661
Shively H L. (114) 309
Shockley M A W (74) 604
Shoemaker G E (94) 2040
Shonle H A. (96) 1430
Short A. R (21) 986
Shorten J A (11) 1823
Shortle A G (98) 308
Showalter C P (120) 921
Showalter E. M (152) 606
Shropshire C W (141) 1168
Shukevich I I (130) 543
Shuman J W (75) 1167 (48) 1744
Shumate D L (154) 1660
Shurly B R. (87) 1167
Shutter H W (69) 1353
Sibley W K. (39) 151
Sicard J A. (39) 226 (43) 988 (56) 1587
Sidaine J (79) 1825
Siegel I W (81) 778 (112) 1745
Sievers R (120) 993
Silbergleit H (41) 694
Siler J F (10) 819 (9) 1271
Sill E M (67) 1493
de Silva F I (87) 1067
Silverberg M 137 (32) 810
Silvestri T (60) 463 (118) 849 (84) 1827
Silvestrini I (89) 1664
Simmonds B S (16) 1494
Simmonds M (52) 1063 (63) 1064
Simmonds N (59) 1821
Simmonds W F (17) 455
Simmons C C (12) 770 (30) 984
Simon A R *1686
Simpson F J *949
Simpson C (14) 986
Simpson J C (41) 532 *1016
Simpson J K (60) 383
Sinclair A N *247
Sinclair J F (111) 841
Sinclair M (5) 842
Singer C (22) 146
Singer J J *1618
Singleton A O (140) 1823
Sinton J A (19) 1169
Sircar S J (21) 150
Sirotinin A N (131) 543
Sisco D I (2) 1819
Sitsen A F (132) 612
Skeel A J *797
Skillern I C Jr (38) 689
Skillern R H (10) 693
Skinner F H (22) 602 *954 (131) 1060 (121) 1431
Skvortzoff A A (113) 1752
Slack H R (54) 1166
Slaght C *2062
Slater H M (110) 1659
Slemons J M. 1818
Sloan H C (34) 603
Sloan I H (103) 1430
Slocum M A (104) 773 (10) 1742 (18) 1888
Slomann H C (98) 1898
Slovtzoff B I (54) 1434
Sluder G (78) 921 (80) 1274
Small C P (159) 63 (127) 692
Smead L F (14) 381
Smith A I (85) 535 (18) 602 (67 68) 920
Smith A L (6) 1746
Smith C A (93) 148
Smith C F (54) 221
Smith C G (145) 1355
Smith C M (57) 690
Smith D (39) 532
Smith E (5) 1823
Smith E A. (136) 842
Smith E F 833 (45) 1658
Smith E O (109) 1275 (146) 1355
Smith E T (77) 921
Smith F B (8) 1494
Smith F C *77
Smith F H (153) 63, (102) 148
Smith F J (6) 305
Smith G E (20) 1661 (18) 1747
Smith G H (68) 222
Smith G M. (18) 58 (53) 603
Smith H (46) 690 (17) 843 (14) 1169 (16) 1584
Smith H H. (123) 63
Smith H. M. (45) 603 (91) 1354
Smith H. M. W (174) 63
Smith J L (15) 225
Smith J M (87) 1430
Smith J R. (104) 986
Smith L (164) 149
Smith L D *1758
Smith L H. (4) 1578
Smith L L. (125) 63 (65) 383
Smith M I (65) 604 (46) 771
Smith N R. (45) 2039
Smith O (20) 1351
Smith S (4) 58 (5) 1494
Smith S M (113) 309 (74) 1493
Smith T (57) 919 1740
Smith W (100) 459 (75) 604
Smith W F (16) 2038
Smith W G (20) 2127
Smith W H. 916 (89) 1745
Smith W M (4) 64
Smith W V (60) 603 (52) 1273 (57) 1890
Smithe P A. (101) 773
Smithies F W (98) 384
Smits J C J C (14) 1888
Smitt W E. (86) 1280
Smoot J B (133) 1060
Smyly W (21) 2127
Smyth H C (12) 64
Smyth H F (54 56) 919
Snell A C (111) 1168
Snell E. H (18) 774
Snijders E. P (105) 232
Snively J H (149) 224
Snoek A (98) 1827
Snow W F (25) 689 *1003
Snure H (76) 773
Snyder J R. (26) 1579 (130) 1583
Snyder W H (99) 1059
Sobel L L. (83) 610
Söderbergh G (102) 1827
Sofi A (60) 1895
Sohmer A E J (61) 1745
Sokoloff G A (136) 543
Sokolowsky A (78) 846
Soldevilla C G (36) 2044
Soledade F (47) 1434
Sollier P (37) 226 (26) 386 (37) 2128
Sollmann T 758
Solomon H C (36) 147 (19) 220 (37) 306 (43) 383 (20) 457 (66) 1429
Solomon M (61) 383
Somen H (41) 607
Sommer E (57) 844 (82) 990
Sommerfeld A (89) 1589
Sommerfeld P (75) 540
Sonne C (122) 1282
Sonnenberg A. A (68) 464
Soper H W (124) 604 (9) 982
Sørensen S T (124) 1282
Soresi A. L (127) 612
Sormani B P (101) 392 (19) 922
Soubeyran M (30) 311 (26) 1356
Soukhanoff S A. (94) 391
Soule W L 376
Souter W N (124) 692
Southard E E (37) 306 (44) 383 (12) 601 (69) 1166
Southworth T S (145) 224
Sowell G A. (131) 1431
Spaar E C (8) 386
Spain K. C (64) 221
Spalding A. B (131) 605
Spangler D (124) 1355
Spangler R H (23) 1824
Spät W (113) 611
Spaulding E R *95
Spaulding H J (79) 986
Spear I J (148) 1355
Speed K (103) 1354
Speer N C (83) 459
Speer R E 1350
Speese J (138) 1660 (13) 1888
Speidel E (74) 1274
Spelman J D (68) 604
Spence H (23) 226 (20) 1747
Spencer F R (32) 532
Spencer H R (25) 1661
Spencer W H (7) 838
v Speyr T (87) 153 (22) 2043
Spiller W G (83) 534 *855 (1) 1426
Spilman S A (46) 1744
Spiro K. (60) 228
Spitta O (88) 610
Spitz H (172) 149
Spitzer L. (98) 1360
Spitzy H (89) 1359 (74) 1750
Spolverini L. N (74) 390
Spratling W P (52) 147
Springer K. (108) 315
Sputh C B (144) 1275
Squire H N (100) 1583
Squires J W (145) 63
Stabler W H (28) 59
Stack E H. E (5) 1168
Stanley L L *1090
Stansfield F J (29) 150
Stanton A. T (12) 310
Stark H. S (62) 2040
Starkey F R. (131) 459 (65) 985
Starr M A. (106) 841
Stauffer W H. (101) 1659
Stearns A. W (5) 601
Stebbins N I. (99) 1167
Steel M (69) 1058
Steel W A. 1270
Stefanowicz L (63) 389
Stefansky V K. (114) 1666
Steiger M (58) 539
Stein A. (10) 1165 (63) 2040
Stein I. F 1811
Stein O J (29) 532
Stein R O (74) 846
Steinbock (63) 1278
Steinbrück (87) 314
Steinert E. (56) 607
Steinharter E C (37) 1744
Stellwaag (82) 314
Stempell W (65) 1749
Stengel A (152) 536
Stenvers H W (10) 2127
Stephan (84) 928
Stephens G A. (25) 310 (10) 1660
Stephens J W W (8) 606
Stephenson S (3) 1892
Stepp W (67) 313 (83) 990
Stern (50) 1748
Stern A. (82) 921
Stern C (86) 847
Stern E. (92) 69
Stern H (21) 146
Stern N S (27) 1427
Stern W (114) 543
Sternberg W (40) 1061
Stettner E. (60) 1063
Stevens E F (123) 149
Stevens F (36) 918
Stevens G T (17) 1743
Stevens H C *1373
Stevens H. W (40) 984
Stevens J L. (104) 1079
Stevens J W (132) 1583

Maclaud [Tetanus] (36) 1293
McLaughlin A J [Syphilis] 1902
McLean A D, [Quinin in malaria] (96) 1290
McLean R C, [Plant hairs] (26) 405
Macleod J J R, [Glycosuria] (15) 486
McLester J S [Syphilis] 1287
McMahon F B, [Colitis] (66) 807
McMeans J W [Experimental appendicitis] (25) 1780
Macmillan G A [Typhoid epidemic] *1681
McMullin J J A., [Oxygen] (103) 1290
McNally W D [Mercury poisoning] (48) 1289
MacNeal, W J [Wassermann test] (70) 312 [Sewage disposal and pellagra] (22) 1780
McNeil A. [Salicylic acids] (12) 1660
McPhedran L [Action of epinephrin] (18) 1780
McPherson R [Eclampsia] (36) 659 [Cesarean section] (37) 659 [Cathartics during puerperium] (47) 1873
McWhorter G L, [Duodenal infusion] *1395
McWilliams H. I [Bacteriolytic power of rabbit serum for typhoid bacilli] (50) 875 [Typhoid vaccine intravenously] (51) 875 [Bacteriolytic power of serums] (52) 875
Maddux C [Complement fixation in tuberculosis] (86) 1664
de Magalhaes O, [Fungus infection] (112) 157
Magee H E [Antiseptics] (5) 880
Maggiore S [Diphtheric paralysis] (49) 1513
Magnus G [Sugar for wounds] (74) 744
Magnus V [Herpes zoster] (127) 234 [Achondroplasia] (135) 947
Magnus Alsleben E. [Nephritis in field] (50) 812
Magnuson P B [Fractures of os calcis] *530
Magoun J A H [Colonic dilatation] (119) 1437
Mahler L [Syphilis and internal ear] (85) 1221
Mahu G [Mastoiditis] (54) 1669
Mair W, [Scarlet fever] (22) 1007
Malcolm J D [Postoperative tympanites] (3) 1946
Manier J O [Nonspecific measures in infections] 1286
Mankiewicz O [To remove drug stains] (70) 743
Manley O T [Spleen tissue] (67) 1582
Mann F C [Jejunal mucosa] (75) 661 [Cholecystectomy] (111) 1437
Mann L [War neuroses] (58) 584
Manton W P [Insanity in women] (78) 808
Manwaring W H [Anaphylactic and immune reactions] (49) 875 [Absorption of foreign protein] 1659
Marañon G [Diabetes insipidus] (119) 946
Marchesini R, [Eosinophil cells] (88) 1011
Marcy C H [Tuberculosis of tongue] (67) 1663
Marfan A B [Diarrhea] (36) 942 [Infant feeding] (44) 1668 [Adenoids] (39) 2010
Marina A. [Sensory disturbances in typhoid] (44) 2011
Marine D [Spleen tissue] (67) 1582
Marinucci R K., [Leishmaniasis] (106) 587
Marion G [Nephrectomy] (47) 1293
Mariotti G [Echinococcosis of lung] (59) 1513
Markoe J W [Posture in obstetrics] (31) 659 [Appendiceal abscess] (41) 1873
Marquis E [Treatment of wounds] (41) 1877
Marriott W M [Calcium and magnesium in blood] 1939
Marshall H. W [Fractures of carpal bones] (9) 1002
Marshall, M J [Adipocere] (59) 1064
Martin C F, [Diabetes] (13) 310
Martin E H [Syphilis] (110) 1005
Martin L [Hemorrhagic jaundice] (39) 315
Martin T R [Secondary anemias] (64) 1581
Martin W [Quintuplets] 1343
Martiri A., [Staining of body fluids] (77) 745, [Sugar in urine and spinal fluid] (102) 945
Martland H S [Trinitrotoluene poisoning] *835
Marvin F W [Fibromyxomas of peripheral nerves] (116) 878
Mason E H., [Diabetes] (13) 310
Mason V R [Citrate method] *1677
Masserini P [Medical radiology] (50) 1878
Matheny A. R, [Cholecystectomy] (156) 403
Mathers C [Poliomyelitis] (56) 225 [Influenza] *678
Mathieu A [Hemorrhagic rectocolitis] (51) 152
Matko J [Malaria] (97) 156 (96) 586
Matsunami T, [Skin reactions] (87) 1145
Mattei, C [Gastro-intestinal derangement] (34) 1440
Matteucci G [Purpura] (52) 317
Matthews J R [Protozoal findings in dysentery] (5) 941 [Intestinal protozoa] (2) 941
Mattrais H [Protuberant abdomen] (34) 1948
Mauclaire P, [Gangrene of uterus] (26) 228
Maurel E [Nitrogenous foods] (39) 583 [Hygienic meal] (18) 1510
Mauriac P [Overlooked heroes of war] (48) 1009
Maxcy K. F [Poliomyelitis] *752
Mayer C [Calcium in urine] (66) 1071
Mayer C P, [Lymphocytosis in syphilis] (73) 668, (80) 884 (103) 1011, (68) 1442 (84) 1670, (72) 1951
Mayo C H. [Cancer of rectum] 222 (33) 735 [War and medicine] *1673
Mayo W J [Kidney stones] (160) 403 [Myomas of uterus] *887
Mayo Robson A. W [Nerve grafting] (9) 739
Means J H. [Caffein and heat production] (26) 1872, [Metabolism with leukemia] (29) 1872
Means J W [Cancer] *180
Medalia L S [Bacterial findings] 798
Meek W J, [Cardiac impulse] (5) 64
Melrowsky E [Buds on spirochetes] (74) 230
Mejia L H [Typhoid] (59) 1879
Mejio C R [Paralysis after rabies] (63) 1442
Melkikh A A [Wassermann and Stern reactions] (82) 1951
Meltzer S J [Medical Brotherhood] 930 [Gallbladder disease] (6) 1579
Mendel L B [Corn gluten (58) 806 [Cotton seed as food] (58) 1064 [Uric acid] *1805
Mendenhall D R [Prenatal and natal conditions] (125) 1066
Menten M L [Alkalinity of blood] (53) 1781
Mercier R [Pulse in soldiers] (6) 69
Merighi M [Jaundice] (61) 1219
Merklen P [Syphilitic nephritis] (57) 1009 [Uremia] (63) 1350
Merle E [Serotherapy in tetanus] (36) 315
Merz H [Venereal diseases] (69) 1071
von Meyer E [Gastric hemorrhage] (43) 666
Meyer K F [Cutaneous hypersensitiveness] (83) 1145 [Typhoidin reaction] (82) 1145
Meyer W [Tuberculin therapy] (90) 489
Michell F [Jaundice] (61) 1219
Mignon A [Field hospital] (61) 153
Milian G, [Iodin poisoning] (46) 1949
Miliani A., [Femoral hernia] (110) 233
Miller A. H. [Reactions of tubercle bacillus to sperm oil] (24) 1007
Miller C W [Bence-Jones proteinuria] (49) 1435
Miller H, [Gastric disorders] (63) 488
Miller J [Blood in gas poisoning] (19) 2009
Miller J L [Nontuberculous pulmonary infections] 1870 [Foreign proteins] 1940
Miller T G [Pneumoconiosis] 1870
Mills C H [Injections of neosalvarsan] (4) 1784
Mills G W [Acetone in urine] (115) 150
Mills R W, [Habitus and viscera] 1252
Milo J G [Hallux valgus] (122) 157
Minerbi C, [Functional tests of heart] (50) 2011
Minkowski M [Physiology of brain] (80) 1351
Minot G R [Blood in pneumonia] *545 [Blood platelets] (42) 1211
Minvielle [Uremia and internal secretions] (32) 942 (41) 1069 [Function of thyroid] (52) 1349 [Thyroid in uremia] (44) 1585
Misuraca F [Stitch lesions in kidneys] (42) 1293
Mitamura, T [Tsutsugamushi] (37) 578
Mitchell A. G [Pneumococci in infants] (94) 1005
Mitchell A. P [Surgical tuberculosis] (19) 1666
Mitchell L [Hernia in man] *634
Miyagawa Y [Tsutsugamushi] (37) 578 [Uncinariasis] (94) 885 [Schistosoma infection] (95) 885
Miyazaki H [Warmth hemolysis] (75) 1442
Mock, H E. [Industrial medicine] *1 [Night clinic] 1573
Mohilevith C [Serum treated with pararabin] (35) 578
Mohler H K., [Calcium in blood] *1309
Moloney M, [Pyonephrosis] (176) 403
Mom J C [Pruritus] (101) 1789
Momose G [Sugar determination] (77) 1442
Monatz R [Postoperative jaundice] (43) 1877
Moncorvo A Jr, [Heliotherapy] (76) 1788
Mondelange J [Cholesterinemia in paratyphoid] (31) 1948
Monnier E [Pyloric stenosis] (51) 942
Montgomery C M, [Skin reactions] (87) 1145
Montgomery E E [Puerperal sepsis] (86) 1508
Moor F C [Tuberculosis] (64) 1346
Moore C L [Phenol excretion] (2) 309
Moore H F [Ethylhydrocuprein] (15) 1505
Moore J J [Arthritis] (33) 399 (9) 1505
Moore R F [Retinitis of arteriosclerosis] (33) 740
Moore S E [Examination in labor] (5) 486
Moorhead J J [Intestinal obstruction] (44) 938
Moots C W [Blood pressures] (10) 146
Morat J P [Heart beat] (38) 228 [Resuscitation] (44) 1069
Moreau L [Quinin abscesses] (33) 1511 [Malaria] (42) 1877
Morel L [Prostatic enlargement] (40) 1293
Moreschi C [Jaundice] (61) 1219
Morf P F [Appendicitis] *902
Mori A [Factitious affections] (85) 1588
Moriarta D C [Radium] (6) 398
Morita M [Lung infection] (16) 1210
Morris R E [Digitalis] (69) 1065
Morris R S [Tonsillectomy] (84) 401 [Requirements in English] 1937
Morrison J T, [Secondary suture] (4) 1067
Morriss W H [Blood sugar and pregnancy] (34) 1289 [Anesthesia acidosis] *1391
Morse A [Amino acid nitrogen of blood] (27) 1942
Morse M E [Autonomic nervous system] (94) 401
Morse P F [Tubercle bacillus] (83) 401
Mortimer J L [Syphilis of duodenum] (25) 1062
Mosenthal H O [Water and glucose of blood] (64) 66 [Diet in diabetes] 1869 [Pituitary solution] 1871 [Diabetes] (25) 1942
Mosiman R E [Tuberculosis of thyroid] (140) 1875
Moss W L. [Blood transfusion] *1905
Mosti R [Amputation of thigh] (66) 1670
Mott F W [Hemorrhages of brain] (3) 1946
Motzfeldt K [Pituitary body and renal function] (46) 224
Moulonguet P [Wounds of knee] (30) 1877
Moure E J [Wounds of larynx] (65) 1010
Mouriquand G, [Cornmeal] (40) 1948
Mühsam H [Lumbar puncture] (56) 492
Mühsam R [Incision in occiput] (58) 742
Muijs D [Ringworm] (114) 496
Müller P T, [Bacilli carriers] (68) 944
Müller S [Oxyuris vermicularis] (109) 1589
Mulon C [Corpus luteum] (32) 1148, (39) 1667
Mundell J J [Pituitary extract] *1601
Munk F [Contracted kidney] (67) 743
Munroe H S [Torsion of ovary] (48) 660
Muns W E [Blood pressure in ether anesthesia] (31) 148
Murard J [Wounds of knee] (30) 1877
Muret M [Exploratory curetting] (26) 811
Murillo F [Rabies] (102) 1353
Murlin J R [Pancreatic diabetes] (71) 66 [Sodium carbonate] (72) 66
Murphy J A [Emetin] (111) 313
Murphy J B [Cancer immunity] (66) 1582 [Metabolism with leukemia] (29) 1872
Murphy J T [Mechanics of stomach] (15) 398
Murri A [Cerebrospinal sclerosis] (67) 1788
Murtz A P [Sublingual medication] (21) 227
Musser J H Jr [Pneumonia] *1231
Myers V C [The banana] *1022, [Animal diastases] (44) 1064

N

Nadler W H [Osteomalacia] (10) 1660
Nagayo M. [Tsutsugamushi] (37) 578
Nagy A [Hard edema] (76) 586
Naito H [Paralysis of diaphragm] (79) 1514
Nakagawa K [Ambard's constant] (2) 1067
Nassau C F, [Fecal fistula] (113) 1875
Nathan P W [Arthritis deformans] (53) 1943
Natvig J R [Calcium deposits in bursa] (138) 947
Neal J B [Serum preservatives] *1035
Neave S [Cerebrospinal fever] (19) 809
Nechaeff A. A. [Scurvy at Petrograd] (106) 1353
Neel A V [Injury of ulnar nerve] (90) 1952
Neill A. J [Catalase in muscles] (2) 804 [Thyroid and catalase of tissues] (8) 2006
Neilson F [Social insurance] 396
Neiva A [Leishmaniosis] (65) 1879
Nelson C F [Output of calcium] (67 68) 66
Neri V [Freezing injuries] (85) 1072
Neubürger T, [Pneumonia] (75) 230
Neuhauser H [Finger made from rib] (54) 492
Neuhof H [Subdural space] *970 [Fascia transplantation] (109) 1437
Neustaedter M. [Poliomyelitis] *1531
New G B [Blastomycosis] *186 [Retractor] *1253
Newburgh L H [Vagus nerves in pneumonia] (29) 147 (10) 2006 [Anemia] (79) 940
Newcomet W S [Nevi] (10) 577
Newell F S [Cesarean section] *604
Newham H B [Malaria] (15) 1067
Newmark L [Infundibular tumor] (11) 1505
Neymann C A [Nucleic acid injections] (35) 1289

Q

Quadri, A, (131) 156
Queen S A (35) 840
Quénu, E (47) 538, (62) 1587
Quénu J (58) 925
Querens P L (112) 308
de Quervain, F (126) 155
Quick, E (156) 385
Quigley D T, (79) 223
Quillian G W, (51) 1429
Quillin L J (53) 458
Quimby, A J (125) 1431
Quimby W A. (125) 1431
Quinan C (54) 603
Quinby W C (59) 690, (51) 1352
Quinlan F J, (106) 1430
Quinn N J (30) 146
Quirin, M., (117) 780

R

Raab F H. (85) 841
Rabaud, (41) 1586
Race J (9) 2037
Rackeman F A 2031
Rahe J M, (30) 381 (15) 983
Raia V L, (94) 1892
Raimondi R (38) 2128
Raiziss G W (94) 62
Rakus T G (109) 779
Rahm, K (95) 847
Ramond F (52) 1748
Ramsey J W (32) 1744
Randall, A, (127 137) 63
Randall, B A (5) 1426
Randel B W (107) 1745
Randolph B M, (196) 63
Randolph J H, (45) 918
Rankin, W (7) 1276
Ranque A, (21) 386
Ransohoff J 215, 217, (111) 1059, *1196
Ransom, B H, (89) 535
Ranson S W (3) 773
Rapin A., (25) 2043
Rapin O J (45) 312
Rappaport, B (80) 534 *943, *1448
Rardin J S (107) 773
Rascher F, (67) 695
Rassers J R F (102) 232
Rathbun, W L *1760
Rathery F (33) 226 (40) 1662, (67) 1825, (74) 1826
Ratterman, H T, *171
Rauch R (74) 926
Rautenkrantz J, (94) 1359
Ravaut P, (49) 1748
Ravenel, M P, (26) 306, *613
Ravogli, A (48) 1658
Rawlings E (102) 223
Rawlins, J G (115) 385
Ray, L A, (56) 1057
Ray V, (141) 1431
Rea C (145) 536
Read, C F, (89) 459
Read J S (113) 459
Reasoner M A, (188) 63, (123) 536 *1917
Reber W (157) 63 (121) 1822
Reckzeh P (55) 313 (72) 539 (82) 610, (62) 845 (65) 926 (86) 928 (45) 1062 (54) 1278 (21) 1432
Reder F, *272 (8) 381
Redfield C L (118) 986 (30) 1657
Redfield W C (21) 689
Reed A C, (10) 1426
Reed C A L (186) 63, *336 912, *1607 (45) 1744
Reed C B (115) 1059, (79) 2040
Reeder F, 2119
Reeder, J E (78) 147
Reeder, W G, *1385
Reeve, J (48) 918 (26) 1272
Reeves, E A (100) 148
Reformatsky N N (83) 1896
Regnault, J (51) 1895
Rehfisch, (51) 227
Rehfuss, M E, (7) 838
Rehn, E (96) 1359
Reiche, F, (81) 1750
Reichmann, M, (111) 1354
Reid H R Y, (125) 1822
Reijs, J H O, (112) 992
Reik H O, (75) 921
Reilly T F, *160, 379, 529, (83) 921
Reinbold, P, (48) 312
Reinhold, C H, (12) 1584
Reisman E, (81) 986
Reiter M, (42) 66 (41) 694, (26) 1432
Reither, E (114) 611
Remer, J, (43) 1272
Remlinger P, (39) 607, (37) 924
Rémond, E, (27) 311
Remsen, C M *28 *262 (6) 1888
Remy, A H M de S (104) 1275
Rendu, A (71) 152
Renner, D S *651
Reno, W W, (102) 691
Rénon L (22) 220 (28) 694, (55) 925, (38) 1277
Renshaw, A (1) 921
Rethi L, (79) 230
Retinger, J (47) 458, (28) 1492 (77) 1745
Rettger, L F (47) 1352 (44) 1820
Reuben M S, (34) 1352
Reusch W, (62) 228 (57) 1749
Reuss A (71) 313
Reuter, M, (73) 777 (88) 928
Rexford W K (22) 1056
Reynolds C E *952
Reynolds W S, (90) 459, (83) 1058
Rhamy, B W *1190
Rhein J H W (45) 306 1888
Rhein M L (95) 384
Rhese, (53) 228
Rhodes, G B, (15) 58 (52) 1420
Rhodes T A (161) 224
Ribbert H, (42) 694
Rich E C, (25) 1820
Richard, C (103) 1167
Richard G (58) 925
Richards A (10) 455
Richards, A. E (10) 769
Richards G L (17) 532 (83) 691
Richards T W, (132) 385 (135) 1355
Richardson, D L, (146) 310
Richardson, F L, (32) 147
Richardson M L (5) 769
Richter G (66) 147 2119
Richter, H G (33) 537
Richter, K (52) 1357
Riddell, W R (143) 224, (91) 841
Rideal S (12) 58
Ridge F J (114) 1275
Ridpath R F (87) 691
Rieder H (81) 990
Riedl F (79) 68 (80) 230
Riesman D *85 (5) 305, 688, (129) 1168 *1381
Riggs, C F 2035
Riggs T F, (80) 2040
Rightor H (106) 308
Rightor H H (33) 1744
Riha W W, (115) 459
Rimbaud L (34) 1495
Ringer A. I, (151) 536
Risley F H (35) 306
Risley S D (117) 459
Rist E, (53) 1825
Ritchie J (15) 225
Rittenhouse E E (7) 58
Ritter J 592
Rivers W H R (24) 537, (31) 606
Rives A (42) 538
Rizzuto, G A (110) 316
Robbins, F (91) 691
Roberg D N (77) 384
Roberts A J (58) 458
Roberts D, (23) 602
Roberts E L *1025
Roberts, H H (75) 1659
Robérts, J (130) 842
Roberts J B (163) 63 379, (39) 689 (133) 1168 1263
Roberts, N (136) 1355
Roberts P W, (120) 604 (94) 1582
Roberts S E (113) 1431
Roberts S R (41) 458
Robertson, C M., (84) 1275
Robertson, G E (136) 1355
Robertson G M., (15) 1276
Robertson H E, (5) 1742, (27) 1889, (4) 2125
Robertson L L (82) 691
Robertson M (24) 1584
Robertson N, (3) 1493
Robertson O H (52) 603 2004
Robertson T B *1009, (56 60) 1057, (55) 1580
Robertson W (13) 842 (14) 1660, (26) 1661
Robertson W E, (58 68) 1493
Robertson, W S (148) 1746
Robin A. (23) 694
Robins, F (58) 2040
Robins, J R (32) 221
Robinson, B, (78) 307, (65) 772 (98) 773 (132) 1431
Robinson, C M (97) 535
Robinson E F (79) 841, (17) 1888 2120
Robinson, G C (31) 59 *1611
Robinson, S (116) 1745
Robinson W (3) 1276
Robinson W L 2002
Roby, J (111) 1168
Roch M, (41) 924
Rochard (50) 1748
Rochedieu R, (68) 1587
Rocher L, (37) 1662
Rochet (35) 1747
Rockey A. E (116) 604, (19) 1888
Rockey P (106) 1822
Rockman J, (43) 1428
Rockwood L C (39) 1272
Rodenbaugh, F H, (65) 221, (12) 2126
Rodenwaldt E, (106) 154
Rodman, W L, 597
Rodriques F L, (71) 1896
Roemer J, (96) 773
Roemheld L, (70) 777
Roessingh M J, (123) 1361
Roger, (30) 924, 1267
Roger E (43) 538
Roger H (37) 66
Rogers A, (29) 984
Rogers, E J A (27) 221
Rogers J (30) 381, (15) 983
Rogers J D (139) 1275
Rogers L (2) 460 (16, 24) 843, (10) 1060, (5) 2126
Rogers, L A (15) 1579
Rogers M H (31) 603
Rogers O F Jr, (22) 1165
Rogoff J M, (68) 1891
Rohdenburg, G L, (117) 536, (72) 691
Rohlf E L (32) 2038
Rohlf W A, (34) 1272
Röhmann, F, (71) 926
Rolleston H D (22) 461
Rolleston J D (8) 1169
Rollet E, (58) 152
Rolph F W (35) 1579
Romagnolo C, (81) 1827, (57) 1895
Romanelli I (99) 991
Romano C, (43) 1433 (81) 1664
Römer R (112) 697
Romero O L (103) 991
Rondke W G (60) 67
Rondoni P, (109) 316
Roos, C G A (46) 1820
Röper, (87) 1280
Rosanoff A J (20) 1579
Rose R H. (150) 63
Rosen I (53) 918
Rosenau M J (46) 1352
Rosenbaum N, (56) 695
Rosenberg C (26) 1056
Rosenberg M (94) 928
Rosenberger, R C (36) 689
Rosenberry A B (153) 385
Rosenfeld G (30) 1495
Rosenheck C *1604
Rosenow E C, *1175 (50) 1273, (62) 1581
Rosensohn M, (74) 1429
Rosenthal C (49) 988, (35) 1495, (52) 1586
Rosenthal J *333
Rosenzweig S B (78) 1353
Rosewarne D D (16) 2127
Ross, C F (159) 310
Ross, E H, (78) 1493
Ross E L, (8) 838
Ross G W, (67) 841
Ross R (10) 460
Ross T S (12) 1823
Rossier G (40) 312
Rost E (88) 540
Rost F (105) 779
Roth A. W (138) 460
Roth O (56) 1895
Rothacker A. (92) 847
Rothschild, A (90) 928
Rotter E (52) 389, (102) 928, (72) 1664
Roubier C, (43) 1662
Rouhier G (46) 227
Roulland H, (34) 843
Roumianzeff T D (106) 1666
Rouquette (46) 775
Rous P (70 71) 533, (52) 1352, (53) 1580 2004
Rousseau (34) 1356
Roussel L, (41) 775
Roussy B (24 36) 1356
Roussy G, (19) 386, (41) 538 (38) 924
Routier A (29) 226 (34) 2128
Routsong R C (13) 918
Rouveix J, (21) 1356
Roux F (42) 925
Roux J (44) 312
Rovatti G C, (52) 463
Rovin A M (101) 1745
Rovsing T (116) 1752
Rowan C J (26) 2038
Rowman J J *873
Rowe A H (28) 59 (5) 532 (58) 1273 (67) 1581
Rowe E H (136) 536
Rowlands M J (36) 606
Rowlands R P, (19) 1061, (5) 1660
Rowlette R J (10) 1276
Rowntree L G *870, (23) 1056 (46) 1428, 1885
Rows R G (6) 1494
Roxo H, (91) 1665
Roy D, (24) 532 (100) 986 1491
Roy K A. *800
Roy P S (192) 63
Royce, C E *1288
Royer B F (73) 1493
Royster H A. 143 (84) 1058
Rubel H M (67) 1822
Rubens, M (100) 154, (46) 388
Rubino C (34) 1433
Ruby F M. (69) 841
Rucker J B Jr (99) 773
Rucker M P (154) 63
Rucker S T (138) 1168
Rüdiger G (70) 228
Rudis Jicinsky J, (136) 63 (79) 1353
Rudolf R D, (26) 843 (34) 1579 (8) 1660
Rueck G A, (109) 1430
Ruediger E, (104) 928
Ruediger G F, (19) 306
Ruggles A H (41) 984
Rugh J T, (16) 689
Ruh H O, *941 (5) 1351 (37) 2038
Rühl H, (90) 1750
Rummel H (85) 314
Rummo G (106, 108) 70, (115) 316 (77) 390
Rumpf (54) 389
Runeberg E, (122) 993
Rusca C L (119) 543
Rusca P (73) 390
Russ S (5) 692
Russell B R G (6) 1823
Russell C W, (108) 223
Russell E L (99) 459
Russell, W G (29) 1657
Rutelli G (32) 2043
Ruth C E, (5) 688
Ryerson E W (15) 689
Ryffel, J H, (25) 922

S

Sabouraud R (56) 988
Sachs, E, (107) 223
Sachs T B (6) 58
Sacquépée E (18) 2042
Saenger M (90) 541
Sagal Z, (60) 1890
Saguchi S, (126 127) 543
Sahud M (35) 1492
Saller J, (2) 982 2032
Saint C F M (5) 1276
St Clair, C T (152) 460
Sainton P (20) 386
Sajous C E de M (73) 1353
Sakagami K (34) 606
Sakai S (97) 1665
Salant W (1) 838
Salatich P B (113) 692
Salerni A (89) 1174
Saliba J *1295 (21) 1427
Saliva L A (80) 1167
Salmon W T (136) 460
Salmond R W A. (2) 1746 (8) 2127
Salomon H, (84) 1589
Salomon M (66) 1172
Saltzman F (91) 465
Salus G (78) 230
Salvador, J (64) 464, (35) 2044
Salvini C (59) 463
Salzer (50) 389
Salzman H A 50
Sampson H H (3) 1660
Sampson J A (107) 841, 2033
Sandelin, E (94) 465
Sanders W E (47) 533
Sanes K. I, (10) 381 (1) 769
Sanford A H, (94) 384
Sanger F M (119) 1275
Sansum W D, (56) 533 (54 55) 1057
Santesson C G (102) 466
Santos Fernandez J (27) 1056
Santy P, (37) 1747
Saphir, J F (61) 1493
Sardou G (48) 988
Sargent C S (41) 1428 (91) 1430
Sargent P (8) 986
Sarrailhé A (2) 1431
Satterlee A R, (34) 1820
Satterlee H. S *618
Sattler R (110) 773
Sattler, R R (54) 1580
Sauer, K. (87) 1359
Sauer, L W (47) 1273
Sauer W (94) 847
Sauerbruch (70) 67
Saul E (100) 466
Sauphar 1161
de Saussine B (45) 151
Savariaud (40) 844
Savill A (9) 2127
Sawyer J P (133) 309
Sawyer W A (33) 1165
Saxl A, (79) 68 (78 86) 696
Saxl P (76) 1065
Saxon R L (30) 306
Scala A., (124) 780
Scalone I (85) 1173 (37) 1433 (84) 1827
Scanlon, D L (51) 1890
Scardino P H (154) 1583
Sceleth C E *860
Schachner A (90) 2040
Schaefer F (88) 990
Schaeffer T W (151) 1660
Schäfer A. (94) 541
Schaffner, P M (74) 2040
Schallert R (75) 1750
Schamberg J F (94) 62, (63) 1166
Schanz A (62) 608

Viton J J [Tuberculin therapy] (110) 946
Vivaldo J C [Mental disturbances] (64) 1879
Volpino G [Trichinosis] (62) 1295
Voncken, J [Wounds of colon] (16) 69 [Physicians and war] (33) 1069
VonderMühll P, [Medical secrecy] (73) 154
Vulliet H., [Pyloric stenosis in infants] (51) 942

W

Wada T, [Proteus infection] (78) 1443
Waddell J A [Strychnin and vas deferens] (83) 1212 [Pharmacology of vagina] (69) 1456
Wade E M, [Typhoid carriers] *1882
Wadia M D [Death after salvarsan] (11) 490
Wadsworth A B [Antipneumococcus serums] (68) 1582
Wagener H P, [Open door' in China] 1341
Wainwright J M [Compound fractures] (90) 1005
Waits C E [Femoral aneurysm] 221
Walker C A [Bone disease] *839
Walker C B [Instrument for deep sewing] *707
Walker E. L, [Oil of chenopodium] *1456
Walker G, [Salvarsan] 1572
Walker I C [Diphtheroid organism] (82) 661 [Bronchial asthma] (89) 661 (55 57) 1943 [Staphylococcus in asthma] (60) 1943
Walker J E [Xanthochromia of cerebrospinal fluid] (71) 736
Walker J W T [Bladder in gunshot injuries] (9) 809
Walker M. A. [Rural obstetrics] 136
Wallace C [Surgery of abdomen] (32) 1667
Wallace C J [Ectopic pregnancy] (107) 1508
Walsh J H, [Patents on salvarsan] 1203
Walter W [American Medical Golfing Assn] 1423
Walters C F [Abdominal wounds] (16) 809
Walther H W E [Ureteral calculus] 1206, [Urethral clamp] *1696
Walton A J [Treatment of wounds] (14) 314
Wang C C [Pidan] (58) 666
Wang C Y [Tubercle bacilli] (13) 1147 [Bovine infection of tuberculosis] (6) 1215
Wang S L [Tuberculosis] *1963
Wani [Acute febrile jaundice] (37) 811
Ward C [Acute leukemia] (2) 1584
Ward W G, [Sodium cacodylate] 390
Wardell E L [Uric acid] *1805
Warden C C [Gonococcus] *432
Warfield L M, [Pulse pressure] *824
Warren B S [Health insurance] (113) 1005
Warren J H [Myelomas] (59) 660 [Giant cells in tuberculosis] (54) 1943
Washburn B E, [Hookworm disease] *1162
Watabiki T [Whey medium for gonococcus] (25) 1007
Watanabe C K [Urea excreting function of kidneys] (70) 66 [Urea in blood] (7) 1505
Waters C A [Roentgenography of lungs] (10) 1505
Watkins S S [Tonsillar and nasopharyngeal infections] (28) 659
Watson A [Tetany and parathyroids] (6) 1784
Wearne R G [Acetone in urine] (115) 150
Weaver G H [Diphtheria bacilli] (62) 660
Webb G B, [Tuberculosis] (106) 1066
Weber F P, [Diabetes insipidus] (11) 222
Weber H [Electrotherapy in heart disease] (38) 811
Wedholm K [Development of muscles] (98) 746
Weekers L [Sympathetic ophthalmia] (37) 1585
Weichardt W [Albuminoid bodies] (55) 584 [Parenteral injection of albumin] (62) 813
Weil P E [Tuberculous pericarditis] (49) 584 [Coagulating power of blood] (50) 1787
Weil R [Anaphylaxis] (72) 312 [Tuberculin reaction] *972
Weill E [Medical prisoners] (13) 69 [Cornmeal] (40) 1948
Weiss H B [Mercuric chlorid poisoning] *1618
Weiss R S [Blastomycosis] 391
Wells H G [Beta nucleoproteins] (49) 65 [Spontaneous sarcoma] (55) 660
Werelius A. [Cholecystectomy] *1545
Wertenbaker W, [Pituitary solution] *1612
Westenhofer M [Incision in occiput] (58) 742
Weston T A [Spinal anesthesia] (5) 150
Wetterdal P [Tumors of carotid gland] (137) 410
Wheeler G W [Poliomyelitis] *280
Wheeler W I de C [Abdominal aneurysm] (12) 1438
Whipple G H [Bile pigment metabolism] (18 19) 486 (6) 1001 [Blood proteins] (36) 578
Whitcraft J H [Wassermann test] (97) 490
White C F [Injections of neosalvarsan] (4) 1784
White C J [Eczema] *81
White C S [Abdominal incisions] (131) 878
White E P C [Abderhalden reaction] (71) 807
White F W [Stomach in syphilis] (28) 223 [Digestion] 1776
White P D [Auricular flutter] *844
White W A [Psychanalysis] *1591
White W C [Tuberculosis] (9) 222 (67) 1663
Whiteford C H, [Enterospasm] (8) 1347
Wichmann S E [Supernumerary nipples] (101) 886
Widal F [Typhoid and paratyphoid vaccination] (28) 881
Widerøe S [Gastro enterostomy] (111) 1074
Widmark E M P [Alcohol in urine] (90) 1298
Wieland F [Gallstone surgery] (84) 1151
Wiener K [Albuminoid bodies] (55) 584
Wiese O [Bacillary dysentery] (60) 230
Wiggers C J [Physiology of auricle] (25) 146 (26) 147, [Venous pulse] (37 38) 224
Wikner E [Blood pressure in elderly] (140) 948
Wile U J [Absorption of mercury] *1024 [Icterus gravis syphiliticus] *1311
Wilensky A O [Stomach function] *890
Willems C [Immediate exercise for wounds] (56) 1349
Williams E M [Posterolateral sclerosis] (71) 149
Williams J L [Output of calcium] (67) 66
Williams J R [Diabetes] (15) 310 [Plotting charts] (80) 489
Williams R R [Vitamins] (57) 1435
Williamson R T [Bread substitutes] (10) 314 [Diabetes] (4) 879
Willink L W H T [Railroad physician] (120) 587
Willmoth A D [Joint fractures] (88) 1783
Wilmaers J [Spirochete jaundice] (49) 1349
Wilson D W [Mammalian medulla] (21) 1780
Wilson G S [Pyrexia and inoculation agglutinins] (18) 941
Wilson J D [Syphilis] (99) 490
Wilson J G [Explosives and ear] (1) 1291 (8) 1784
Wilson L B [Sympathetic system in goiter] (2) 222 [Autonomic nervous system] (64) 807, (76) 1874
Wilson W J [Cultures of anaerobes] (20) 1947
Wiltrun C [Motor range of joints] (99) 1152
Winslow F S [Leukemia and benzol] (90) 1065
Wintz H [Uterine hemorrhage] (57) 883
Wirz A [Exfoliating dermatitis] (57) 229
Wirz C M [Placenta prævia] (52) 1218
Wise L E [Sodium citrate] (51) 65
Wishart W [Tetany and parathyroids] (6) 1784
Witherspoon J [Rubber sink stopper] *911
Witter F C [Sarcomatous degeneration] (85) 67
Wohl M G [Cysts of jaw] (34) 143
Wolferth C C [Blood changes] (30) 399
Wolff J W [Phagocytosis] (124) 157
Wood E J, [Pellagra] (3) 222
Woodruff J V, [Health insurance] 796
Woods A C [Complement fixation in tuberculosis] (86) 1664
Woolley P G [Pyloric stenosis] *1543 [Aortic aneurysms] (22) 1661, [Aneurysm] (57) 1782
Wulling F J [Justice to pharmacist] 1934
Wybauw R [Reflex arterial systole] (35) 1585
Wyler J S [Corneal ulcer from varicella] *1476
Wynn, F B [Pulmonary tubercular lesions] (64) 488
Wynne O W J [Wounds of blood vessels] (3) 150

Y

Yamada M [Pericardium] (80) 1514 [Larvae of filaria] (103) 1589
Yamagiwa K [Experimental cancer] (101) 1589
Yamamoto T [Larvae of filaria] (103) 1589
Yanishevsky A E [Reflex pain from wounds] (83) 1515
Yanovsky V L [Salicylic medication] (116) 587
Yates J L [Hodgkin s disease] *747 (36) 1289
Yawger N S [Criminal epileptic] (91) 1005
Ylppö A [Absorption of air in stomach] (77) 232 [Vulvovaginitis] (75) 744
Young H H [Prostatectomy] *526 [Double ureter and kidney] (57) 877 [Radium] *1174, [Enlarged prostate] (42) 1662
Young T O [Autonomic nervous system] (64) 807
Yount C C, [Spinal analgesia] *601
Yurgelíunas A A [Infectious diseases] (124) 946
Yushtchenko A I [Addison's disease] (70) 1879
Yusifoff C M [War for existence of nations] (94) 1789

Z

Zacharias G [Diuresis] (72) 744
Zeisler E P [Chancres of lip] *1546
Zener C R [Horse asthma] *843
Zentmire Z [Gastric residuum] *167
Zingher A [Poliomyelitis] *817 [Schick test] (6) 936
Zinsser H [Syphilis in rabbits] 1578 [Hyperleukocytosis] (83) 1664
v Zumbusch L [Venereal diseases] (77) 494
Zunz E [Serum treated with pararabin] (35) 578
Zweig W [Malaria] (97) 156, (96) 586

INDEX TO PAGES

OF THE JOURNAL, ACCORDING TO WEEKLY ISSUES—VOLUME LXVIII, JANUARY-JUNE 1917

Pages	No	Date	Pages	No	Date	Pages	No	Date	Pages	No	Date
1 74—	1	Jan 6	589 668—	8	Feb 24	1075 1152—	15	April 14	1517 1590—	21	May 26
75 158—	2	Jan 13	669 746—	9	Mar 3	1153 1222—	16	April 21	1591 1672—	22	June 2
159 234—	3	Jan 20	747 816—	10	Mar 10	1223 1298—	17	April 28	1673 1790—	23	June 9
235 320—	4	Jan 27	817 886—	11	Mar 17	1299 1378—	18	May 5	1791 1880—	24	June 16
321 410—	5	Feb 3	887 948—	12	Mar 24	1379 1444—	19	May 12	1881 1952—	25	June 23
411 496—	6	Feb 10	949 1012—	13	Mar 31	1445 1516—	20	May 19	1953 2056—	26	June 30
497 588—	7	Feb 17	1013 1074—	14	April 7						